SINHGAD TECHNICAL EDUCATION SOCIETY'S®

SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING®

Approved by AICTE Vide F. No. 740-89-004 (NDEGAPR/ET/2000) &
Affiliated to Savitribai Phule Pune University ID. No. PU/PN/ENGG/155/2001
Accrediated by NBA & NACC
Recognized by UGC under Section 2 (f) & 12 (B) of UGC Act 1956

Sinhgad Institutes

S. No. 44/1, Vadgaon (Budruk), Off Sinhgad Road, Pune - 411041.

• **Tel :** +9120-24354938, 24100295/293 • **Tele Fax :** 020-24354938 • **Email :** principal.skncoe@sinhgad.edu • **Website :** www.sinhgad.edu

PROF. M. N. NAVALE
M.E. (Elect.), MIE, MBA.
FOUNDER - PRESIDENT

DR. (MRS.) SUNANDA M. NAVALE
B. A., M. P. M., Ph.D.
FOUNDER - SECRETARY

DR. A. V. DESHPANDE
B. E., M. E. (Computer Engg.), Ph. D.
PRINCIPAL

Date: 11/04/2022

To,
The Director
National Assessment and Accreditation Council (NAAC)
P.O. Box No. 1075, Nagarbhavi,
Bengaluru- 560 072

Subject: Proofs of Metric No. 2.2.1

Reference: Metric No. 2.2.1: The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

Dear sir/Madam,

As per said subject kindly find below the index of File Descriptions/Documents for your valuable information.

INDEX

Smt. Kashibai Navale College of Engineering ★ Vadgaon(Bk.) Pune - 41.

Principal
(Dr. A. V. Deshpande)

Principal
Smt. Kashibai Navale
College of Engineering
Vadgaon(Bk.), Pune - 41.

INDEX		
Sr. No.	**File Descriptions /Documents**	**Page No.**
2)	**Advanced learners**	
	1) List of Advanced learners	20-23
	2)List of activities conducted for slow learners	23-23
	3) Samples of certificates of papers published by advanced learners	24-30
	4) Sample of full length paper published by advanced learner	31-41

Thanking You,

Smt. Kashibai Navale College of Engineering Vadgaon(Bk.) Pune - 41.

Principal
(Dr. A. V. Deshpande)

Principal
Smt. Kashibai Navale
College of Engineering
Vadgoan(Bk.), Pune - 41.

SINHGAD TECHNICAL EDUCATION SOCIETY'S

SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING,

PUNE-411 041

DEPARTMENT OF INFORMATION TECHNOLOGY

Remedial Class Record for Slow Learner

Sr. No.	Academic Year	Semester	Particular
1.	2019-20	I	1. Notice 2. Time Table 3. Slow Learner Progress Report

Smt. Kashibai Navale College of Engineering Vadgaon(bk.) Pune - 41

Head of Info. Tech. Deptt.

SINHGAD TECHNICAL EDUCATION SOCIETY'S

SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING,
PUNE-411 041

DEPARTMENT OF INFORMATION TECHNOLOGY

Academic Year 2019-20(SEM-I)

Date :- 27/09/2019

NOTICE

All SE students are informed that Remedial classes fortheir respective subjects of semester -I are schedule from 30/09/2019(Online exam) and from 15/10/2019 (Endsem exam).The detailed time table is given below. All the eligible students should attend classes. Attendance is mandatory.

Time Table For Remedial Classes

S.E.				
Day	Date	Time	Subject	Staff
Monday	30/09/2019	4:30 pm – 6:00 pm	DS	Prof. A.D. Londhe
	15/10/2019			Prof. V. S. Khandekar
Tuesday	01/10/2019	4:30 pm – 6:00 pm	DELD	Prof. A.S.Narote
	16/10/2019			Prof. S.M.Kamble
Wednesday	02/10/2019	4:30 pm – 6:00 pm	COA	Prof. S.V.Deshpande
	17/10/2019			Prof. S.V.Deshpande
Thursday	03/10/2019	4:30 pm – 6:00 pm	FDS	Prof. G.G.Bilaye
	18/10/2019			Dr.N.P.Kulkarni
Friday	04/10/2019	4:30 pm – 6:00 pm	PSOOP	Prof. R.S.Apare
	19/10/2019			Prof. S.Y.Bobade

Smt. Kashibai Navale College of Engineering Vadgaon(BK) Pune-41

Prof. R. H. Borhade

HOD IT

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

SINHGAD TECHNICAL EDUCATION SOCIETY'S

SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING,
PUNE-411 041

DEPARTMENT OF INFORMATION TECHNOLOGY

Academic Year 2019-20 (SEM-I)

Date :- 16/08/2019

NOTICE

All SE students are informed that Remedial classes (Insem Exam) for their respective subjects of semester -I are schedule from 20/08/2019 (Monday). The detailed time table is given below. All the eligible students should attend classes. Attendance is mandatory.

Time Table For Remedial Classes

T.E.				
Day	Date	Time	Subject	Staff
Monday	20/08/2019	4:30 pm – 6:00 pm	TOC	Dr. L. V. Patil
Tuesday	21/08/2019	4:30 pm – 6:00 pm	DBMS	Prof. N. S. More
Wednesday	22/08/2019	4:30 pm – 6:00 pm	SEPM	Prof. N. S. Chankhore
Thursday	23/08/2019	4:30 pm – 6:00 pm	OS	Prof. S. A. Nagtilak
Friday	24/08/2019	4:30 pm – 6:00 pm	HCI	Prof. V. D Ghonge

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

Prof. R. H. Borhade
HOD IT

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

SINHGAD TECHNICAL EDUCATION SOCIETY'S

SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING, PUNE-41.

DEPARTMENT OF INFORMATION TECHNOLOGY

Academic Year 2019-20 (SEM-I)

Date :- 24/09/2019

NOTICE

All SE students are informed that Remedial classes (Endsem Exam) for their respective subjects of semester -I are schedule from 01/10/2019 (Monday). The detailed time table is given below. All the eligible students should attend classes. Attendance is mandatory.

Time Table For Remedial Classes

T.E.				
Day	Date	Time	Subject	Staff
Monday	01/10/2018	4:30 pm – 6:00 pm	TOC	Dr. L. V. Patil
Tuesday	02/10/2018	4:30 pm – 6:00 pm	DBMS	Prof. N. S. Chankhore
Wednesday	03/10/2018	4:30 pm – 6:00 pm	SEPM	Prof. N. S. Chankhore
Thursday	04/10/2018	4:30 pm – 6:00 pm	OS	Prof. M. L. Bangare
Friday	05/10/2018	4:30 pm – 6:00 pm	HCI	Prof. V. D Ghonge

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

Prof. R. H. Borhade

HOD IT

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

SAVITRIBAI PHULE PUNE UNIVERSITY, S.E.(2015 COURSE) EXAMINATION,OCT 2019

COLLEGE : [CEGP013380] - S.K.N. COLLEGE OF ENGINEERING

BRANCH CODE: 29-S.E.(2015 PAT.)(INFORMATION TECHNOLOGY) PRINT DATE : 22 FEB 2020

71911428E AYUSHI BALI SUSHMA BALI 71911428E SKNC

SEM.:1	OE	TH	[OE+TH]	TW	PR	OR	Tot%	Crd	Grd	GP	CP	P&R	ORD
214441 *	024/050	036/050	060/100	---	---	---	60	04	A	08	32	---	---
214442 *	038/050	026/050	064/100	---	---	---	64	04	A	08	32	---	---
214443 *	033/050	034/050	067/100	---	---	---	67	04	A	08	32	---	---
214444 *	030/050	036/050	066/100	---	---	---	66	04	A	08	32	---	---
214445 *	036/050	033/050	069/100	---	---	---	69	04	A	08	32	---	---
214446 *	---	---	---	019/025	028/050	---	62	01	A	08	08	---	---
214447 *	---	---	---	020/025	040/050	---	80	02	O	10	20	---	---
214448 *	---	---	---	020/025	043/050	---	84	01	O	10	10	---	---
214449 *	---	---	---	018/025	---	---	72	01	A+	09	09	---	---
210250B *	---	---	---	PP	---	---	PP	00	P	00	00	---	---

SGPA1 : 8.28, TOTAL CREDITS EARNED : 25

.....CONFIDENTIAL- FOR VERIFICATION AND RECORD ONLY AT COLLEGE, NOT FOR DISTRIBUTION.....

71911440D BARAVKAR AKSHAY BHAUSO NITA 71911440D SKNC

SEM.:1	OE	TH	[OE+TH]	TW	PR	OR	Tot%	Crd	Grd	GP	CP	P&R	ORD
214441 *	025/050	021/050	046/100	---	---	---	46	04	C	05	20	---	---
214442 *	020/050	014/050	034/100	---	---	---	FF	04	F	00	00	---	---
214443 *	037/050	021/050	058/100	---	---	---	58	04	B+	07	28	---	---
214444 *	018/050	030/050	048/100	---	---	---	48	04	C	05	20	---	---
214445 *	024/050	024/050	048/100	---	---	---	48	04	C	05	20	---	---
214446 *	---	---	---	020/025	025/050	---	60	01	A	08	08	---	---
214447 *	---	---	---	021/025	028/050	---	65	02	A	08	16	---	---
214448 *	---	---	---	019/025	030/050	---	65	01	A	08	08	---	---
214449 *	---	---	---	020/025	---	---	80	01	O	10	10	---	---
210250B *	---	---	---	PP	---	---	PP	00	P	00	00	---	---

SGPA1 : --, TOTAL CREDITS EARNED : 21

.....CONFIDENTIAL- FOR VERIFICATION AND RECORD ONLY AT COLLEGE, NOT FOR DISTRIBUTION.....

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

STE's

Smt. Kashibai Navale College Of Engineering, Pune-41

Depeartment of Information Technology

Improvement of Slow Learners Through Remedial Lectures

Year: SE 2019-20 **SEM - I** **Subject : DELD**

Roll. No	Name of Student	UT-I Marks(30)	Date : 01/10/2019 Attedence of Remedial Lecture (P/AB)	Online Marks (50)	% of Improvement	Prelim Marks (50)	Date : 16/10/2019 Attedence of Remedial Lecture (P/AB)	Theory Marks (50)	% of Improvement
S9102	Abhishek Ganpat Wadhai	0	P	29	58.00	13	P	24	22.00
S9108	Aman	1	P	29	56.00	7	P	9	4.00
S9111	Ayushi Bali	11	P	33	30.00	22	P	34	24.00
S9114	Baravkar Akshay Bhauso	3	P	37	64.00	20	P	21	2.00
S9118	Bhole Nandkumar Hari	0	P	29	58.00	3	P	20	34.00
S9127	Date Aniket Ashok	5	P	21	26.00	10	P	11	2.00
S9146	Kale Sushma Ravindra	6	P	37	54.00	10	P	31	42.00
S9158	Lawand Vihang Hanmant	0	P	29	58.00	4	P	23	38.00
S9160	Mahajan Mayur Pradeep	3	P	32	54.00	10	P	23	26.00
S9205	Rajput Prashant Suresh	0	P	37	74.00	4	P	31	54.00

SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING ★ PUNE-41

Prof. R. H. Borhade
HOD IT

HOD
Department of Information Technology
Smt. Kashibai Navale Colle

Date: - 23/10/2020

Invitation to Parent- Teacher meeting (2020-2021)

Greetings from SKNCOE,Pune!!!!

We at SKNCOE (E&TC) are organizing Parents Meet (Online Platform) Sat' 24 Oct 2020 at 6:00PM (Probably will last for approximately one Hour).

Parent Teacher Meeting is a prominent and notable feature of our Sinhgad Institute curriculum. The motive is to have close interaction of parents and teachers with regard to the progress shown by their wards and finding workable solutions to the problems coming in the way of development of their ward. It is requested you all to attend the Parent-Teacher Meeting.

Parents Meet: Dt. 24.10.2020, Time: 6:00PM

The Google Meet URL:

http://meet.google.com/cpg-qqwq-net

Smt. Kashibai Navale College of Engineering, Pune-41

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

Sinhgad Technical Education Society's

Smt. KashibaiNavale College of Engineering

Vadgaon(Bk) Pune-411041

Sinhgad Institutes

REPORT

on

PARENTS–TEACHERS MEET

Academic Year :2020-2021

Organized on 24/10/2020

Department of E & TC

Smt. Kashibai Navale College of Engineering Pune-41.

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

Report of Online Parent-Teacher meeting held on 24th Oct 2020

The college was organized a "Online Parent-Teacher Meet" due to COVID situation on Saturday, 24th Oct, that served as a connection platform for parents, teachers and the students, where teacher and parents come together to enrich the student's educational experiences and discussed variety of issues, regarding all round development of students.

The meeting was organized under guidance of Principal **Dr. A. V. Deshpande, Vice- Principal Dr. K. R. Borole,** and **HOD Dr. S. K. Jagtap.** Teachers and parents of college students attended the meet.Parent teacher meeting was started with Goddess Saraswati Poojan.

Around 150 parents have joined for the Online Parent-Teacher meeting. The meeting was organized in such a way that parents had a chance of one-to-one interaction with the teachers before the Semester End Exams. It aimed at bridging the gap between parents, students and teachers, keeping parents inform about their ward's performance and progress, discussed the causes behind the student behaviour and performance. This enabled the parents to know about the areas of improvements of their ward, so that they make him/her work towards improvement in the courses required. This meeting provided a platform where the parents and teachers also got to know about each individual personally, so that they can plan accordingly for better results and growth of our students. Overall, it is a platform for sharing the suggestions that helps in improving our students' progress. Parents queries were addressed by the respective section class teacher and faculty. Welcome address and introductory speech were proposed by respective class coordinator.**Mr.R. G. Kulkarni (Training & Placement Officer)** focused on training and placement area, and briefed about current best practices going on for overall development and its implementation. We keep our parents meet in recorded form.

The key points discussed are as follows

1. General information about college facilities and strategies planned in this Pandemic COVID situationfor this academic year was explained.
2. Training programmes conducted were brought to their notice.
3. Special coaching classes and action plans to improve slow learner results were disclosed to the parents.
4. Attendance of the weak student were shown to the parents.
5. Internal assessment test performance and slow learners test performance were shown to the parents.
6. Parents were informed about the Study materials, important questions and sample question papers that were given to the students to ease the weak student preparation.

Smt. Kashibai Navale College of Engineering Pune-41

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41

Parents' Feedback

We were pleased to listen to the parent's feedback and assured them that necessary actions will be taken bounded within the Institutes powers.

1. Parents appreciated, the college provide the online platform for placements and training programmes that were arranged for their ward.
2. Parent's felt happy for the efforts taken by the departments in this pandemics situation by providing Ms Team online platform for regular classes as well as laboratories.
3. Parents requested to inform them about the test's schedules and university exam time table through what's app messages.
4. Please convey the massage regarding training, courses, drives, Mock, Exams etc

Mrs. S. M. Ingawale
Academic Coordinator

Dr. S. K. Jagtap
H.O.D. (E&TC)

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

Parents Teachers Meeting Feedback Analysis Report

Programme:- SE, TE, BE (E&TC)

Date:- 24Th Oct 2021.

No. Of parents attended: - 150.

Feedback by Parents

The college was conducted a "Online Parent-Teacher Meet" due to COVID situation on Saturday, 24th Oct. Around 150 parents have joined for the Online Parent-Teacher meeting. The meeting was organized in such a way that parents had a chance of one-to-one interaction with the teachers before the Semester End Exams.

Based on the feedback received following are the observations made

1. **Parents requested to inform them about the test's schedules and university exam time table through what's app messages.**
   We have already created the parents What's app group to inform all the university as well as college exam schedule and we will continue informing the updates of the same.

2. **Please convey the massage regarding training, courses, drives, Mock, Exams etc**
   As we are informing the same to the students only now as per your suggestion taken, we will inform the same to parents also

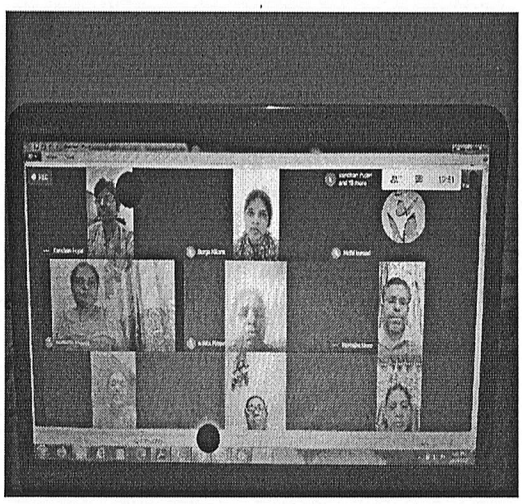
Mrs. S. M. Ingawale
Academic Coordinator

Dr. S. K. Jagtap
H.O.D.(E&TC)

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

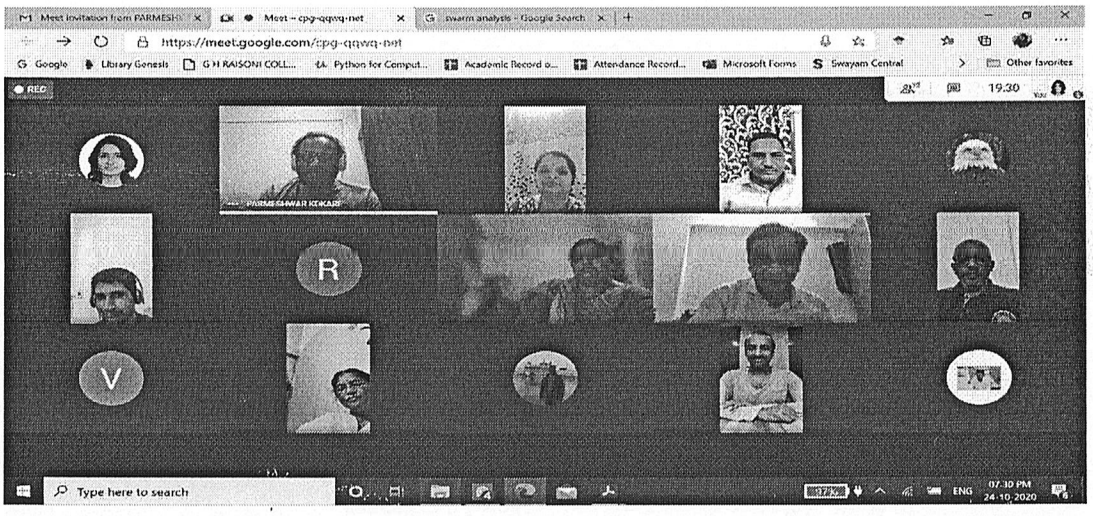
Smt. KashibaiNavale College of Engineering, Vadgaon (Bk), Pune
Department of Electronics & Telecommunication Engg.

EVENT PHOTOGRAPHS



Parent meet Screenshots

Parent meet Screenshots

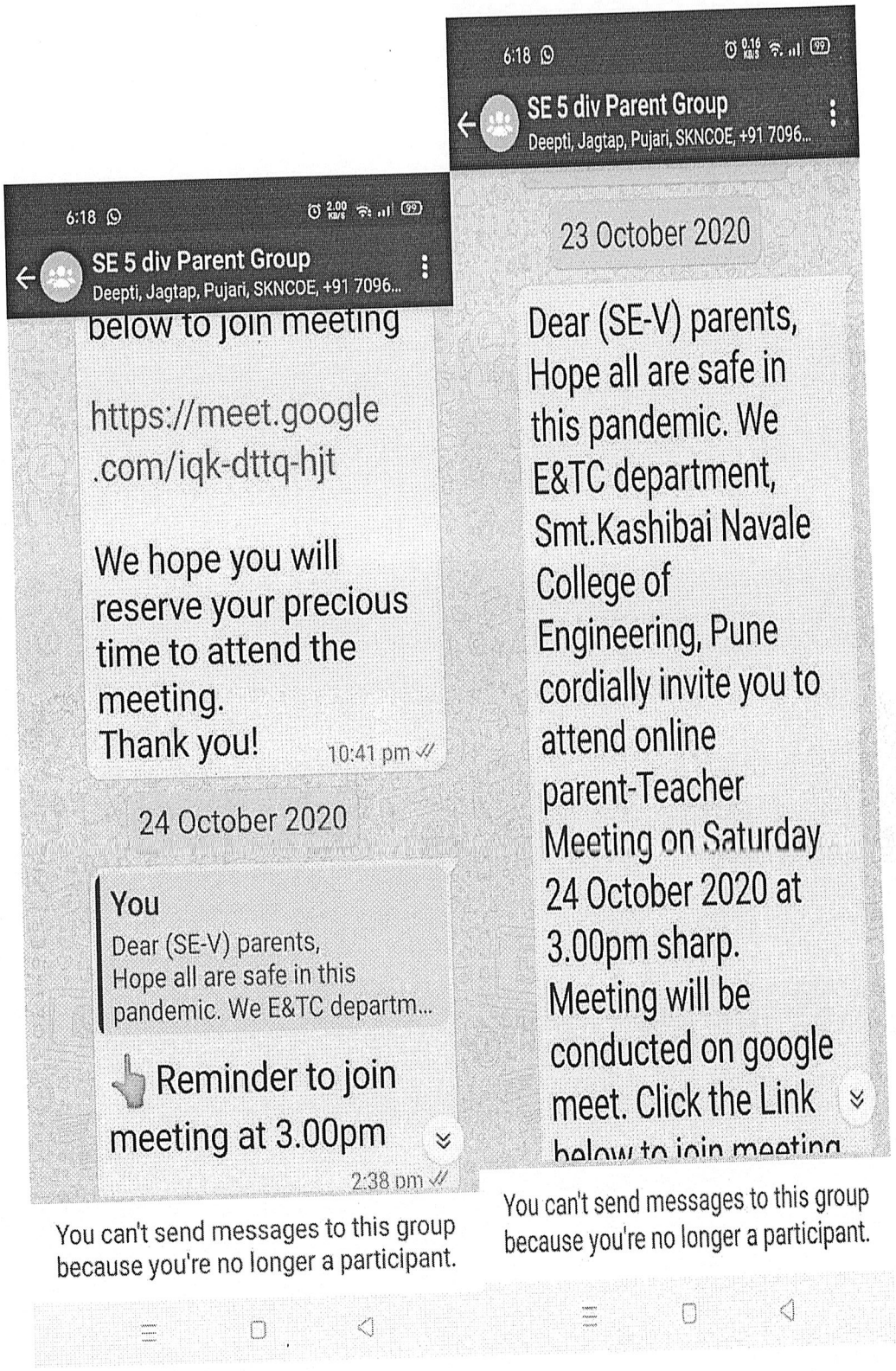


Parent meet Screenshots

Smt. Kashibai Navale College of Engineering Pune-41.

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

EVENT PHOTOGRAPHS



Invitation Screenshots

Smt. Kashibai Navale College of Engineering Pune-41.

Jagtap

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

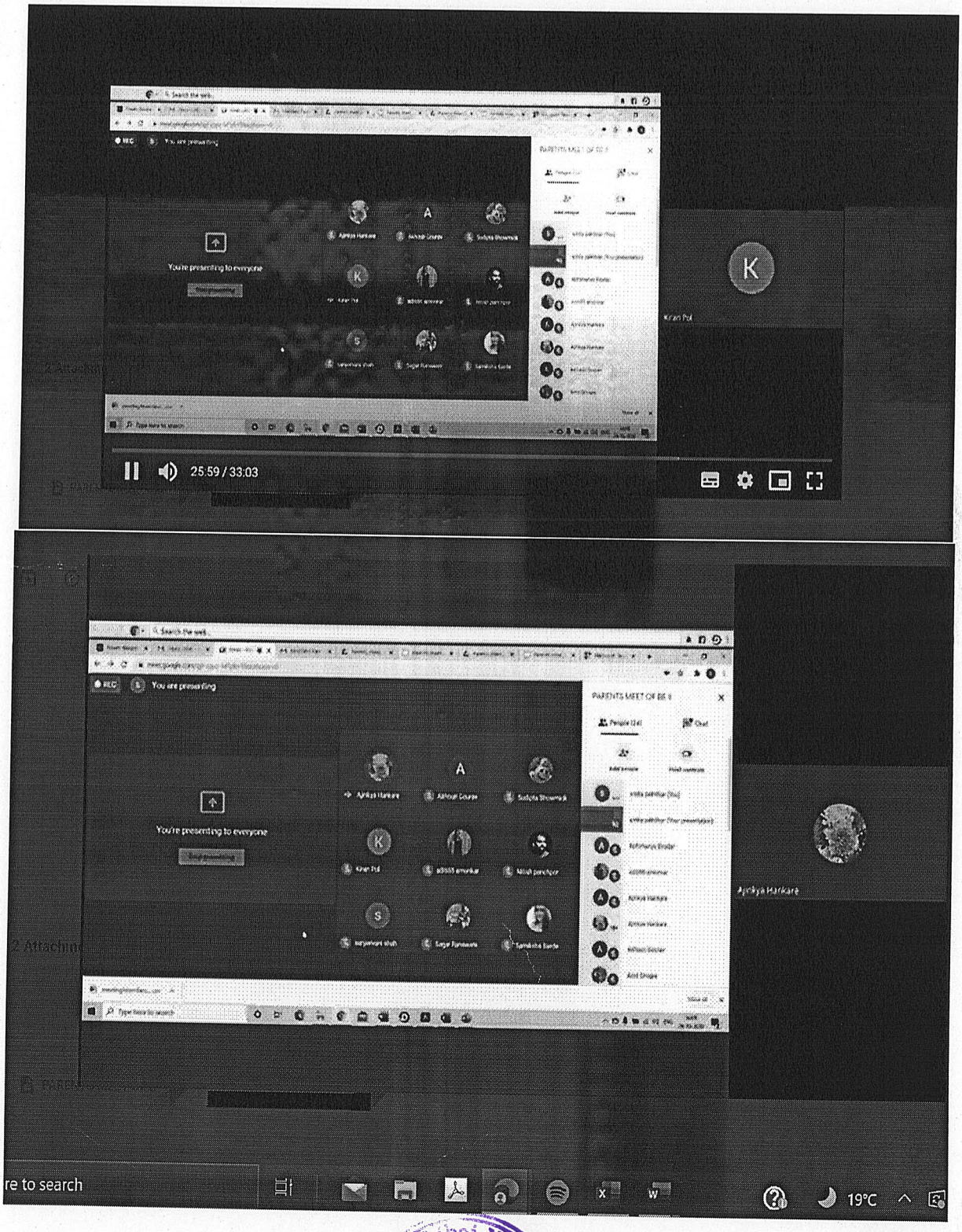
STES's

Smt. KashibaiNavale College of Engg.

Department of Electronics and Telecommunication Engg.

Parent Teacher Meeting List Academic Year 2020-2021 / Sem – I

Live Meeting Photographs



Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

STES's
Smt. Kashibai Navale College of Engg.
Department of Electronics and Telecommunication Engg.
Parent Teacher Meeting List Academic Year 2020-2021 / Sem - I

Sr. No.	Time stamp	Class	Name of the Parents	Parent email ID. (Not compulsory)	Feedback or Suggestion if any
1	10/24/2020 18:00	SE	Vijay Bhaskar Patil		Nil
2	10/24/2020 18:00	BE	Biradar Pritam Abhimanyu		-
3	10/24/2020 18:00	TE	Parande Popat Jayshing		
4	10/24/2020 18:00	TE	Shobha Chandrakant Londhe		Please add parents in students group
5	10/24/2020 18:00	BE	Santosh Hagawane		
6	10/24/2020 18:00	BE	Seema Jadhav	Seemajadhav21875@gmail.com	No suggestions
7	10/24/2020 18:00	TE	Ramrao Kayande	ramraokayande@gmail.com	No
8	10/24/2020 18:01	SE	MANKAR PRAJAKTA DNYANDEO		No suggestions
9	10/24/2020 18:01	TE	Vaishali Kiran Borude		
10	10/24/2020 18:01	BE	Neeta Athavale	neetaathavale@gmail.com	Reduce assignment work
11	10/24/2020 18:01	SE	DADGAL RUTWIK DEEPAKRAO		
12	10/24/2020 18:01	TE	Aparna prakashrao kaje	9657503399	
13	10/24/2020 18:02	TE	Geetanjali Pradeep Mahangade	9762633136	
14	10/24/2020 18:02	TE	Harban Dandekar	harbandandekar21@gmail.com	
15	10/24/2020 18:02	SE	UDDHAV RAM BHUKELE	darshanbhukele2001@gmail.com	
16	10/24/2020 18:03	SE	Shiv Kumar Prasad	annunidhi17@gmail.com	focus more on practical knowledge.
17	10/24/2020 18:03	SE	BHAMARE HARSHAL PRAMOD		
18	10/24/2020 18:03	TE	Suvarna Thobde	9822007414	No suggestions
19	10/24/2020 18:03	TE	Meera Narayan Mhetre	mhetremeera1606@gmail.com	
20	10/24/2020 18:03	SE	Waghmode navnath bhau		
21	10/24/2020 18:04	SE	Mohan narayanrao keche		
22	10/24/2020 18:05	TE	Pooja Shankar Mazire	8698070937	
23	10/24/2020 18:07	TE	Suryawanshi Mallinath	42886555skm@gmail.com	No suggestions
24	10/24/2020 18:07	SE	BAMANE VINAYA RAMESH		
25	10/24/2020 18:07	TE	Sarika mungelwar		
26	10/24/2020 18:08	SE	Shillare Devidas Gangadharrao		No never
27	10/24/2020 18:08	TE	Mahesh Bibave	mmbibave@gmail.com	
28	10/24/2020 18:08	BE	Sunil sutwane	Sunilsutwane21@gmail.com	
29	10/24/2020 18:08	SE	AHIRE RIDDHISHA SANJAY		
30	10/24/2020 18:09	BE	Prakash Gurav	prakashgurav605@gmail.com	take more efforts on T&P activity
31	10/24/2020 18:09	TE	Sanjaykumar mhaske	maskeanjali3@gmail.com	
32	10/24/2020 18:09	SE	HALLE SANKET SATISH		
33	10/24/2020 18:10	BE	Vidya Nitin Kalantri	vidyankalantri@gmail.com	No any suggestion everything is good
34	10/24/2020 18:11	TE	Anuja Kulkarni	Kulkarniadarsh113@gmail.com	
35	10/24/2020 18:11	BE	Sunil madan sisodiya	Sunilsisodiya612@gmail.com	
36	10/24/2020 18:11	SE	BELGE AARTI KALBA		No any suggestions
37	10/24/2020 18:11	SE	Nandkishor Rambhau Gahiwad	gahiwadprasad9@gmail.com	
38	10/24/2020 18:12	SE	Trimbak Gulabrao Chikane	chikanerushabh333@gmail.com	
39	10/24/2020 18:12	SE	BHAGAT GAYATRI GAJANAN		
40	10/24/2020 18:12	TE	Priti Trivedi	anirudh7870@gmail.com	No
41	10/24/2020 18:12	TE	Bhalerao Nivrutti Dattatraya	shrutibhalerao90@gmail.com	Nhi
42	10/24/2020 18:12	TE	Bhanwase Babanrao Shankar	bhanwasejyoti@gmail.com	No
43	10/24/2020 18:13	SE	Rekha kumari	ak.aryankumar22101999@gmail.com	-
44	10/24/2020 18:14	BE	More Sanjay Sadashivrao	kajalsmore2000@gmail.com	No suggestions
45	10/24/2020 18:15	SE	BHAVSAR KUNAL MANISH		
46	10/24/2020 18:15	TE	Smt. Nirmalla Raina		No
47	10/24/2020 18:15	TE	Sunil Ganpati Patil	ruchirapatil22@gmail.com	
48	10/24/2020 18:16	TE	SANJAYA WANDE	ashraywande1422000@gmail.com	Nothing
49	10/24/2020 18:16	SE	Sunil baliram raut	yash2001raut@gmail.com	Yes
50	10/24/2020 18:16	SE	Prakash Annasaheb Gidde	tejasgidde@rediffmail.com	No
51	10/24/2020 18:18	SE	CHAVAN PRATIK RAJENDRA		
52	10/24/2020 18:18	SE	Nalini Gulhane	ygulhane011@gmail.com	Motivate to every students for study and other activity.
53	10/24/2020 18:18	TE	Deepika Budhe		
54	10/24/2020 18:18	TE	Rita Yashwant Devang.	harshdewang@gmail.com	
55	10/24/2020 18:18	TE	Nandkishor Nirhali	aakashnirhali076@gmail.com	

Smt. Kashibai Navale College of Engineering Pune-41

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41

STES's

Smt. Kashibai Navale College of Engg.

Department of Electronics and Telecommunication Engg.

Parent Teacher Meeting List Academic Year 2020-2021 / Sem - I

Sr. No.	Time stamp	Class	Name of the Parents	Parent email ID. (Not compulsory)	Feedback or Suggestion if any
56	10/24/2020 18:19	SE	Sharad vitthalrao maind		proud to study in Sinhgad Education Society's College of Engineering SKN College Vadgaon Pune so do best of your side.
57	10/24/2020 18:19	SE	PAWAR ANISHA SANJAY		
58	10/24/2020 18:19	SE	Dnyandeo Lashiman Mankar	prajaktamankar96@gmail.com	
59	10/24/2020 18:19	TE	Dilip Roy	Dilip Roy	
60	10/24/2020 18:20	TE	Chhaya Madhukar Gahukar	gunjangahukar967@gmail.com	No
61	10/24/2020 18:22	BE	Shriniwas bhandare	bhandaresudarshan2308@gmail.com	
62	10/24/2020 18:22	TE	Chandan Sharma	ychandan590@gmail.com	Nothing
63	10/24/2020 18:23	TE	Nirmala Yadav		No
64	10/24/2020 18:23	SE	Nayana panditrao more	moresairaj960@gmail.com	No
65	10/24/2020 18:24	TE	Babita Sinha	gautamsngh900@gmail.com	
66	10/24/2020 18:24	TE	Shankar Kale	Vaibhavkale@gmail.com	
67	10/24/2020 18:24	TE	Sangita kondalkar	rutujakondalkar5@gmail.com	No
68	10/24/2020 18:25	SE	KHADE SWEETY PRAKASH		Nothing
69	10/24/2020 18:25	TE	Anjalee vivekanand jadhav	Jadhavshubham2024@gmail.com	No
70	10/24/2020 18:26	TE	Arvind Milmile		No
71	10/24/2020 18:26	BE	Seema Jadhav		No
72	10/24/2020 18:26	SE	Pramod Baburao Mulajkar	Pramod Baburao Mulajkar	
73	10/24/2020 18:26	SE	Sunil Shivramji Sapkal	sumitsapkal111@gmail.com	
74	10/24/2020 18:27	TE	Nitin Manohar Tipre	atharvaant915@gmail.com	There is no any instruction
75	10/24/2020 18:27	SE	SUNIL BABURAO NIMBALKAR		
76	10/24/2020 18:28	SE	UDDHAV RAM BHUKELE	darshanbhukele2001@gmail.com	No
77	10/24/2020 18:28	TE	somnath ambure		Nothing
78	10/24/2020 18:29	TE	Sanjay Patil		
79	10/24/2020 18:29	TE	Mhatu Sadashiv Mahale		
80	10/24/2020 18:31	TE	Aruna Sase		
81	10/24/2020 18:35	TE	Savita k. Bante		
82	10/24/2020 18:17	TE	Meenakshi Gaurishankar Hulaure	rahulhulsure@gmail.com	Nothing
83	10/24/2020 18:18	SE	Popatrao Vitthalrao Gaikwad		
84	10/24/2020 18:18	SE	Prakash Sambhaji Nikose	aman.nikose706@gmail.com	
85	10/24/2020 18:19	SE	Vijay Prabhakar Parate	akshayparate61@gmail.com	
86	10/24/2020 18:19	SE	SETHU NAMBIAR	tarunnamb@gmail.com	no any instruction
87	10/24/2020 18:19	TE	Vatsala jadhav	Vatsala jadhav	
88	10/24/2020 18:19	TE	Vidya Jawalkar		
89	10/24/2020 18:19	SE	Ram Bhardwaj		
90	10/24/2020 18:19	BE	Sunil Vishnupant Sutwane	sunilsutwane21@gmail.com	No
91	10/24/2020 18:19	TE	Jayashri Niranjan Lemde		
92	10/24/2020 18:20	TE	dadaso nivrutti magar		
93	10/24/2020 18:20	SE	Madhavrao Tulashiram Pethkar		good
94	10/24/2020 18:20	TE	shamal kamble		
95	10/24/2020 18:20	SE	Rajendra Ramdas Pagar	pagar.rutu01@gmail.com	very good
96	10/24/2020 18:21	TE	Vyaniatesh Bhimrao madake		
97	10/24/2020 18:21	SE	SHITOLE ASHOKRAO BAPURAO		
98	10/24/2020 18:21	SE	Nikhil Joshi	nicolas.flemel@gmail.com	
99	10/24/2020 18:22	SE	MOTKAR SANGITA RAMESH	pratikshamotkar@gmail.com	
100	10/24/2020 18:22	TE	Vijay shashikant more	sonalmore0304@gmail.com	
101	10/24/2020 18:22	TE	Vikram Pralhad More		
102	10/24/2020 18:23	BE	Manisha chavan	anandchavan113@gmail.com	There is no any instruction
103	10/24/2020 18:23	BE	PRAMODINI RAJENDRA BORASE	pragatiborase212@gmail.com	
104	10/24/2020 18:23	BE	Manisha Prashant Gonjari	9422009333	No
105	10/24/2020 18:23	TE	Mrs. Chaya Kamble	s07kamble@gmail.com	NO
106	10/24/2020 18:23	TE	Jayashree Prakash Shikhare		Nothing
107	10/24/2020 18:23	TE	SHINDE BHALCHANDRA		No
108	10/24/2020 18:23	BE	Prashant Subhash Gonjari	prathameshgonjari@gmail.com	No
109	10/24/2020 18:23	BE	Rekha Sinha	akhourinishantsinha@gmail.com	no any instruction
110	10/24/2020 18:24	BE	Gajanan vitthal madavi	Anita gajanan madavi	
111	10/24/2020 18:24	SE	Trimbak Chikane	chikanerutuja05@gmail.com	No
112	10/24/2020 18:24	SE	Dilip Narayan Patil	patilratnadip111@gmail.com	No
113	10/24/2020 18:24	SE	Gore Jayashri Jotiram	hrishigore776@gmail.com	No
114	10/24/2020 18:24	BE	Alka Takle	anikettakle23@gmail.com	Nothing
115	10/24/2020 18:25	TE	Yasmeen Sarfrajkhan pathan	rahatpathan97@gmail.com	No

Smt. Kashibai Navale College of Engineering Pune-41.

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

STES's

Smt. Kashibai Navale College of Engg.

Department of Electronics and Telecommunication Engg.

Parent Teacher Meeting List Academic Year 2020-2021 / Sem - I

Sr. No.	Time stamp	Class	Name of the Parents	Parent email ID. (Not compulsory)	Feedback or Suggestion if any
116	10/24/2020 18:25	BE	Varsha bhise	Vaishnavi.bhise04@gmail.com	No
117	10/24/2020 18:25	TE	Revansidh B. Reure		
118	10/24/2020 18:25	TE	shivkanta patil		YES ALL ARE GOOD
119	10/24/2020 18:25	TE	Dattatray Laxman Rakh		No
120	10/24/2020 18:25	BE	Gopal M.Bondre	bondreankita22@gmail.com	Nothing
121	10/24/2020 18:26	BE	DESHPANDE MANJUSHA PRASANNA	priya.desh1304@gmail.com	No
122	10/24/2020 18:26	BE	Meena khadkodkar	khadkodkar241@gmail.com	No
123	10/24/2020 18:26	SE	Adinath S. Patil	Riteekpatil693@gmail.com	No
124	10/24/2020 18:26	SE	Chavan Dilip Sadhu	hrithikchavan71@gmail.com	NIL
125	10/24/2020 18:26	TE	SHINDE BHALCHANDRA	SHINDE BHALCHANDRA	
126	10/24/2020 18:26	TE	CHHAYA PATIL		
127	10/24/2020 18:26	BE	Ramesh Giri	giriravi116@gmail.com	No
128	10/24/2020 18:26	BE	Jaya Nandkumar Londhe		
129	10/24/2020 18:27	BE	Shiv Kumar Prasad	annunidhi17@gmail.com	VERY GOOD
130	10/24/2020 18:27	BE	Mhaske sangita vitthal	mhaskeh2000@gmail.com	good
131	10/24/2020 18:27	TE	SATPUTE RAMESH DIGAMBER	ramsatpute5882@gmail.com	
132	10/24/2020 18:27	TE	Ranjana Manohar Makam	smmakam25@gmail.com	very good
133	10/24/2020 18:27	SE	Jitendra Rangarao Patil	9860102679	
134	10/24/2020 18:27	TE	SHINDE BHALCHANDRA		
135	10/24/2020 18:27	TE	Jagadeesh D Sheelavant	varshasheelavant28@gmail.com	THANK YOU
136	10/24/2020 18:28	SE	NITA BHAGAWAN CHAVAN	ajay7219331770@gmail.com	
137	10/24/2020 18:28	TE	Kavita Rathod	vishalr7757@gmail.com	Nothing. Thank you □□
138	10/24/2020 18:28	SE	Suresh Vitthal Petare	7719016527	
139	10/24/2020 18:28	SE	Vinay sadashiv pimparkar	ankitapimpalkar711@gmail.com	Nothing. Thank you
140	10/24/2020 18:28	TE	Shobha Devi		GOOD
141	10/24/2020 18:28	TE	Jitendra parmeshwarji sharma		
142	10/24/2020 18:29	TE	Qureshi Chand Pasha	ayeshafaryal222@gmail.com	VERY GOOD
143	10/24/2020 18:29	TE	Smita Shetgar	vaips.231099@gmail.com	
144	10/24/2020 18:29	BE	Patil Ramakant	bhateshpatil519@gmail.com	Nothing. Thank you
145	10/24/2020 18:29	BE	Rajkumar Rudrappa patil	Frekindixdo@yahoo.com	
146	10/24/2020 18:29	BE	Rekha sanjay gond	Someshgond12@gmail.com	No
147	10/24/2020 18:29	BE	Shobha Govekar	hrushikeshgovekar0703@gmail.com	No
148	10/24/2020 18:29	SE	SUNIL JODHALAL JAISWAL	Jaiswaljeet33@gmail.com	
149	10/24/2020 18:29	SE	Mr.Sahdev Singh Tomar	t16sobhit@gmail.com	Nil
150	10/24/2020 18:30	SE	Subhash Haribhau Jamdade	jamdaderugwed@gmail.com	no

Dr. S. K. Jagtap
HOD(E&TC)

Smt. Kashibai Navale College of Engineering Pune-41.

Head
Dept. of Electronics & Telecommunication Engineering
Smt. Kashibai Navale College of Engineering, Pune - 41.

Sinhgad Institutes

STES's

Smt. KashibaiNavale College of Engineering, Pune-41

DEPARTMENT OF INFORMATION TECHNOLOGY

Advanced Learners
A.Y.2020-21

Top Thirty-one Students (by considering sem-II 2020-21 result) are considered as Advanced Learners.

Sr. No	Roll No.	Name of Student	% or SGPA	Participation
S.E.				
1	S20162	JANAGAVE VAISHNAVI YASHWANTRAO	8.52	Advanced Cpp C and Cpp
2	S20132	CHAUDHARI MAYANK SANDEEP	9.84	Advanced Cpp C and Cpp
3	S20259	BORSE HARSHAL MAHENDRA	9.59	Advanced Cpp C and Cpp
4	S20214	PATIL MANAS DHANRAJ	9.66	Advanced Cpp C and Cpp
5	S20293	DAYAMA RADHIKA NATWARLAL	9.5	
6	S20171	KADLAG AKASH GANESH	9.34	Advanced Cpp C and Cpp
7	S20204	NAGAPURKAR SWARNIMA UPENDRA	9.18	Advanced Cpp C and Cpp
8	S20136	PRANAV DANDGAVAL	9.18	
9	S20233	SASHWAT SUBHDARSHAN ROUT	9.34	
10	S20222	SABALE ADITYA KHANDERAO	8.91	Advanced Cpp C and Cpp
11	S20161	JAGDALE ADITI PURUSHOTTAM	9.48	Advanced Cpp C and Cpp
12	S20149	GAIKWAD SANKET SANJAY	9.57	Advanced Cpp C and Cpp
13	S20279	GUJAR TANMAY BHARAT	9.3	
14	S20240	SHENDKAR ROHIT MAHADEV	9.2	Advanced Cpp C and Cpp
15	S20267	VISHAL BABURAO HARAK	9.09	Advanced Cpp C and Cpp
16	S20260	TOLE SHRADDHA SUNIL	9.52	Advanced Cpp C and Cpp
17	S20123	BHANDARI RITIKA VIJAYKUMAR	9.3	Advanced Cpp C and Cpp
18	S20140	DHANANJAY BOKARE	9.3	
19	S20155	GUDMEWAR SAKSHI RAJENDRA	9.3	Advanced Cpp C and Cpp
20	S20289	PATIL AADITYA SANJAY	9.5	

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

21	S20118	BHAMARE OM VISHWAS	9.18	Advanced Cpp C and Cpp
22	S20157	HARSHIT HIMANSHU	9.05	Advanced Cpp C and Cpp
23	S20114	BADHE ATHARVA DILIP	9.02	Advanced Cpp C and Cpp
24	S20227	REKHAWAR PRIYANKA BALKRISHNA	9.39	Advanced Cpp C and Cpp
25	S20229	SAGANE ANURAG RAJENDRA	9.36	Advanced Cpp C and Cpp
26	S20151	PATIL GIRISH PRADEEP	9.3	Advanced Cpp C and Cpp
27	S20275	SHUBHANGI WARTALE	9.09	
28	S20286	PAWAR PRAJYOT PRADIP	9.25	
29	S20167	JAY SHISODE	8.8	Advanced Cpp C and Cpp
30	S20159	PARTH ANIL JADHAV	8.95	Advanced Cpp C and Cpp
31	S20246	SHINDE KETKI BHANUDAS	8.93	Advanced Cpp C and Cpp

T.E.

1	T20122	DHAIRYA DESHMUKH	95.73	Java Business Application Java
2	T20207	SHAIKH AREEBA ABDUL HAKEEM	95.60	Java Business Application Java
3	T20155	MUSKAN SINGH	93.73	Java Business Application Java
4	T20150	MAHAJAN MAYUR PRADEEP	93.07	Java Business Application Java
5	T20211	SHREYA NANDKISHOR PATIL	93.07	Java Business Application Java
6	T20118	BHANDARE NAMRATA UDAY	91.73	
7	T20209	SHEFALI BHATTACHARJEE	91.73	Java Business Application Java
8	T20263	SHINDE RAKESH DATTATRAY	91.73	
9	T20157	NEMANWAR TEJAS DATTATRAY	91.60	
10	T20260	BADADE AISHWARYA	91.07	Java Business Application Java
11	T20267	NEHA RAJKUMAR SHERE	91.07	Java Business Application Java
12	T20107	ANANT MAYURI BHARAT	90.80	Java Business Application Java
13	T20250	HARSHAL SHRIKRISHNA AMBALKAR	90.67	Java Business Application Java
14	T20208	SHAIKH LUBNA SHAIKHLAL	90.40	Java Business Application Java
15	T20253	GANDHARE PRADNYA DATTATRAYA	90.13	
16	T20212	SHRUSTI PRAVIN BHARAMBE	89.87	Java Business Application Java
17	T20238	VAISHALI SATISH YENOLGE	89.87	Java Business Application Java
18	T20111	BHOLE NANDKUMAR HARI	89.47	Java Business Application Java

Kashibai Navale College of Engineering

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering

19	T20105	AGRAWAL ROHAN MAHENDRA	89.33	Java Business Application Java
20	T20258	RATHOD SANTOSH SUKHDEV	89.07	Java Business Application Java
21	T20247	GHODKE ADITYA PRATAP	88.93	
22	T20143	KOMAWAR ADITYA KISHOR	88.67	Java Business Application Java
23	T20119	CHIPPA HARSHAL SUDARSHAN	88.53	Java Business Application Java
24	T20125	GAIKWAD MANSI DATTATRAY	88.53	Java Business Application Java
25	T20138	JITECHANA	88.53	Java Business Application Java
26	T20130	JAGTAP YOGESH VIJAYKUMAR	88.40	Java Business Application Java
27	T20135	BORKAR RUTUJA RAJESHWAR	88.27	
28	T20168	SAGAR DEVENDRA DHAWANE	88.27	Java Business Application Java
29	T20147	KULKARNI ATHARVA NITIN	88.13	
30	T20270	MARATHE AKSHAY DILIP	88.13	

BE

1	B20215	PHILIP RHEA	9.91	PHP and MySQL R
2	B20160	MANE RENUKA PRASHANT	9.91	PHP and MySQL R
3	B20204	NIKHIL MAHAJAN	9.93	PHP and MySQL R
4	B20104	AJAGUNDE OMKAR BASAVRAJ	10	PHP and MySQL R
5	B20234	THORAT SNEHAL VIJAY	9.93	PHP and MySQL R
6	B20156	LELE NACHIKET GIRISH	10	PHP and MySQL R
7	B20228	SONSALE RUDDHI ASHOK	9.86	PHP and MySQL R
8	B20239	WANHERE HARSH ASHOK	9.95	PHP and MySQL R
9	B20125	DHAYTADAK AISHWARYA VIDYANAND	10	PHP and MySQL R
10	B20250	ADAM RAHUL RAJESH	9.48	
11	B20233	THANGE SHUBHAM RAJU	9.98	PHP and MySQL R
12	B20243	YEOLE SAGAR AVINASH	9.98	PHP and MySQL R
13	B20131	GORE SAMRUDDHI SUNIL	9.98	PHP and MySQL R
14	B20144	JOSHI AKSHATA PANDURANG	9.86	PHP and MySQL R
15	B20157	PATIL HARSHWARDHAN SHRIKANT	9.98	PHP and MySQL R
16	B20238	VYAS SUYOG SANJAY	9.86	PHP and MySQL R
17	B20102	ABHISHEK LAXMAN SHIRKE	9.93	PHP and MySQL R

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

18	B20141	JASORIYA AKASH NARESH	9.84	PHP and MySQL R
19	B20207	PARUTHI JAY MAHESHKUMAR	9.86	PHP and MySQL R
20	B20227	SONAWANE JAYESH HANUMAN	9.91	
21	B20103	AHUJA UDAY VIJAY	9.98	PHP and MySQL R
22	B20126	DHIMATE RUTUJ VIJAY	9.7	PHP and MySQL R
23	B20150	KUMBHAR ABHISHEK BAJIRAO	9.95	PHP and MySQL R
24	B20163	MULEY SHWETA AJAY	9.75	PHP and MySQL R
25	B20246	DEVRAJ ANAND	9.93	PHP and MySQL R
26	B20203	NATHWANI RONAK VINOD	9.95	PHP and MySQL R
27	B20101	ABBU VENKATESH BHASKAR	9.61	PHP and MySQL R
28	B20110	BEDARE PAYAL BIBHISHAN	9.89	PHP and MySQL R
29	B20130	GOEL SHUBHAM	10	PHP and MySQL R
30	B20143	JOGALEKAR ANISHA MILIND	9.73	PHP and MySQL R

Following activities are conducted for Advanced Learners:

1. Value Added Programs (VAP)
2. Guest Lectures
3. Movited students to publish papers in International Journals.
4. Movited students to participate in Swayam NPTEL-LocalChapter.
5. Movited students to participate in MySQL training by Spoken Tutorial Project, IIT Bombay.

Sr.No.	Name of Activity	No. of Activities
1	VAP Conducted for students	0
2	Guest Lectures Arranged for students	0
3	No. of Papers Published By Students in International Journals	2
4	No. of students participated in training by Spoken Tutorial Project, IIT Bombay.	91

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

Prof. R. H. Borhade
HOD I.T.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

Spoken Tutorial
Project at
IIT Bombay

Certificate of Participation

This is to certify that VA[illegible]NAGAVE participated in the **Advanced Cpp** training organized at **Smt. Kashibai Navale College Of Engineering Vadgaon Pune** in **July 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Advanced Cpp** were covered in the training.

Prof. Kannan M Moudgalya
IIT Bombay

August 30th 2020

Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India

Smt. Kashibai Navale College of Engineering
Vadgaon(Bk)
Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

Spoken Tutorial Project at IIT Bombay

Certificate of Participation

This is to certify that **VAISHNAVI JANAGAVE** participated in the **C and Cpp** training organized at **Smt. Kashibai Navale College Of Engineering Vadgaon Pune** in **July 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **C and Cpp** were covered in the training.

August 30th 2020

Prof. Kannan M Moudgalya
IIT Bombay

Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

Spoken Tutorial
Project at
IIT Bombay

Certificate of Participation

This is to certify that **DHAIRYA DESHMUKH** participated in the **Java Business Application** training organized at **Smt. Kashibai Navale College Of Engineering Vadgaon Pune** in **July 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Java Business Application** were covered in the training.

August 30th 2020

Prof. Kannan M Moudgalya
IIT Bombay

Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India

Smt. Kashibai Navale College of Engineering
Vadgaon(Bk)
Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon (Bk.)

Spoken Tutorial
Project at
IIT Bombay

Certificate of Participation

This is to certify that **AKASH JASORIYA** participated in the **PHP and MySQL** training organized at **Smt. Kashibai Navale College Of Engineering Vadgaon Pune** in **July 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **PHP and MySQL** were covered in the training.

August 30th 2020

Prof. Kannan M Moudgalya
IIT Bombay

Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

Spoken Tutorial
Project at
IIT Bombay

Certificate of Participation

This is to certify that **AKASH JASORIYA** participated in the **R** training organized at **Smt. Kashibai Navale College Of Engineering Vadgaon Pune** in **July 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **R** were covered in the training.

September 30th 2020

Prof. Kannan M Moudgalya
IIT Bombay

Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

Spoken Tutorial
Project at
IIT Bombay

Certificate of Participation

This is to certify that **VENKATESH ABBU** participated in the **PHP and MySQL** training organized at **Smt. Kashibai Navale College Of Engineering Vadgaon Pune** in **July 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **PHP and MySQL** were covered in the training.

August 30th 2020

Prof. Kannan M Moudgalya
IIT Bombay

Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India

Smt. Kashibai Navale College of Engineering Vadgaon(Bk) Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

Spoken Tutorial
Project at
IIT Bombay

Certificate of Participation

This is to certify that [redacted] **VENKATESH ABBU** participated in the **R** training organized at **Smt. Kashibai Navale College Of Engineering Vadgaon Pune** in **July 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **R** were covered in the training.

September 30th 2020

Prof. Kannan M Moudgalya
IIT Bombay

Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India

Smt. Kashibai Navale College of Engineering Vadgaon (Bk.) Pune-41.

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041.

IJARSCT

ISSN (Online) 2581-9429

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 7, Issue 1, July 2021

IJARSCT
Impact Factor: 4.819

The Temperature Screening and Face Mask Detection for Preventing Spread of COVID-19

Gautami Kale[1], Akash Jasoriya[2], Divesh Jain[3], Abhilasha Narote[4],
Students, Department of Information Technology[1,2,3,4]
Smt. Kashibai Navale College of Engineering, Pune

Abstract: *Corona virus disease 2019 has affected the world seriously. One major protection method for people is to wear masks in public areas. Furthermore, many public service providers require customers to use the service only if they wear masks correctly. On national level, temperature screening by employers is not mandatory. However, it is strongly recommended for businesses with more than 50 employees and businesses where maintaining social distance may not be realistic. Also government decided to reopen all religious places in this case temperature screening and mask plays crucial role hence we proposed system which automatically detects mask and screen temperature and allows only those who are wearing mask and has body temperature within range. Here we used infrared thermometer for thermal scanning and CNN algorithm for mask detection.*

Keywords: CNN, infrared thermometer, temperature screening, object detection.

I. INTRODUCTION

A novel corona virus has resulted in person-to-person transmission but as far as we know, the transmission of the novel corona virus causing corona virus disease 2019 (COVID-19) can also be from an asymptomatic carrier with no COVID symptoms. Till now there is no report about any clinically approved antiviral medicine or vaccines that are effective against COVID-19. It has spread rapidly across the world, bringing massive health, economic, environmental and social challenges to the entire human population. At the moment, WHO recommends that people should wear face masks to avoid the risk of virus transmission and also recommends that temperature screening should be done for every employee along with social distance of at least 2m be maintained between individuals to prevent person-to person spread of disease. Furthermore, many public service providers require customers to use the service only if they wear masks. Therefore, face mask detection and safe social distance monitoring has become a crucial computer vision task to help the global society.

The primary healthcare challenges in COVID-19 is the infectious virus that spreads rapidly among humans by their close contacts with suspects of COVID-19 positive. This novel infection and sickness were obscure before its occurrence in December 2019. COVID19 is now a pandemic affecting all countries around the world. People who have COVID-19 infection can have a wide range of symptoms, which range from mild to severe illness. Symptoms of COVID-19 can appear from two to 14 days after exposure to the virus. Fever, dry cough, sore throat, headache, muscle or body aches, congestion or runny nose, nausea or vomiting, diarrhea, and sleepiness are the most significant common signs of COVID-19. Still, in severe cases, difficulty in breathing leads to death. Sometimes a few infected individuals have minor or no symptoms; those are asymptomatic carriers. Asymptomatic carriers are hazardous, and it's hard to trace these silent carriers. According to the WHO, 80% of infections are mild or asymptomatic, 15% are severe infections, and 5% are those who require oxygen or ventilation. COVID-19 can spread in three possible ways, such as contacts (direct/indirect), droplets spraying small range transmission, and aerosol in long-range transmission, also known as airborne transmission. In short-range transmission, the virus can spread from human-to-human by droplets from the nose or mouth while coughing and sneezing ban infected person of COVID-19. These droplets can travel 1.8 m (6 feet) far and soon land on the ground. These droplets stay on things and surfaces, for example, tables handle or on handrails. Humans can be infected from touching these kinds of items and then poignant their eyes, nose, or mouth.

According to [15], the primary source of COVID-19 spread is close contact from person-to-person. Asymptomatic

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 7, Issue 1, July 2021
IJARSCT
Impact Factor: 4.819

people are more vulnerable than those people who have symptoms of COVID-19. Figure 1 shows the COVID-19 spread model. Another reason for spreading this virus is touching the surface or object that has a virus on it, and then people may touch their mouth, nose, and eyes, which will be the cause of infection of COVID-19 [15], also reported that the virus could spread from animal to people and vice versa, but the chances of spreading this virus from animal to people are low. They also have evidence of spreading the virus from people to pets, get infected COVID-19 from people who have close contact with their pets, To disinfect the COVID-19, China uses drones to spray disinfecting the liquid around public areas and vehicles wandering in infected zones. The Internet of Things (IoT) and Artificial Intelligence (AI) have changed living standards, and they made a paradigm shift on the horizon for healthcare.

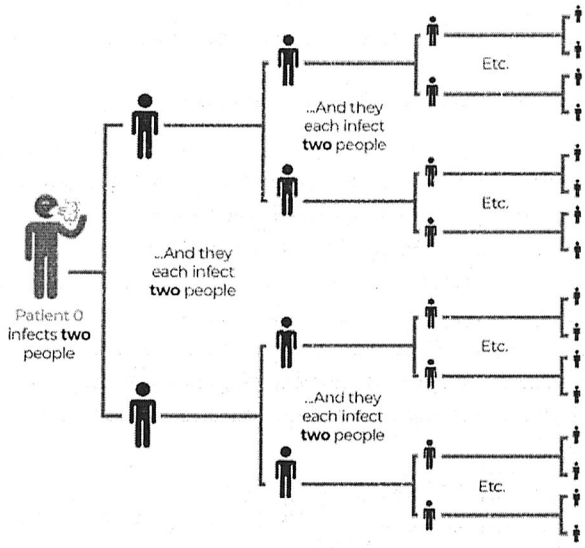


Figure 1: COVID-19 spreading model

IoT and Ai healthcare system has changed from traditional healthcare systems and it also reduced the cost of healthcare services and made it more reliable. IoT applications are used in different systems and technical fields, such as smart cities, smart security systems, and smart grids. There is a long history of healthcare systems and technology. This model [16] uses different IoT sensors, like heartbeat sensors, to measure heartbeat rate, blood pressure, and ECG detection sensors to monitor the patients and store the data in a database, where these raw data have further analyzed the patient.

II. LITERATURE SURVEY

Wearing face masks and following safe social distancing are two of the enhanced safety protocols need to be followed in public places in order to prevent the spread of the virus. To create safe environment that contributes to public safety, Shashi Yadav proposed an efficient computer vision based approach focused on the real-time automated monitoring of people to detect both safe social distancing and face masks in public places by implementing the model on raspberry pi4 to monitor activity and detect violations through camera. After detection of breach, the raspberry pi4 sends alert signal to control center at state police headquarters and also give alarm to public. In [1], modern deep learning algorithm have been mixed with geometric techniques for building a robust modal which covers three aspects of detection, tracking, and validation. Thus, the proposed system favors the society by saving time and helps in lowering the spread of corona virus. It can be implemented effectively in current situation when lockdown is eased to inspect persons in public gatherings, shopping malls, etc. Automated inspection reduces manpower to inspect the public and also can be used in any place.

In [2], Nenad Petrović and ĐorđeKocić introduced an affordable IoT-based solution aiming to increase COVID-19 indoor safety, covering several relevant aspects: 1) contactless temperature sensing 2) mask detection 3) social distancing check. Contactless temperature sensing subsystem relies on Arduino Uno using infrared sensor or thermal

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 7, Issue 1, July 2021
Impact Factor: 4.819

camera, while mask detection and social distancing check are performed by leveraging computer vision techniques on camera-equipped Raspberry Pi.

In [3], RetinaFaceMask, which is a high-accuracy and efficient face mask detector is proposed. The proposed RetinaFaceMask is a one-stage detector, which consists of a feature pyramid network to fuse high-level semantic information with multiple feature maps, and a novel context attention module to focus on detecting face masks. In addition, we also propose a novel cross-class object removal algorithm to reject predictions with low confidences and the high intersection of union. Experiment results show that RetinaFaceMask achieves state-of-the-art results on a public face mask dataset with 2.3% and 1.5% higher than the baseline result in the face and mask detection precision, respectively, and 11.0% and 5.9% higher than baseline for recall. Besides, we also explore the possibility of implementing RetinaFaceMask with a light-weighted neural network MobileNet for embedded or mobile devices.

N. H. Leung et al [4] identified seasonal human coronaviruses, influenza viruses and rhinoviruses in exhaled breath and coughs of children and adults with acute respiratory illness. Surgical face masks significantly reduced detection of influenza virus RNA in respiratory droplets and coronavirus RNA in aerosols, with a trend toward reduced detection of coronavirus RNA in respiratory droplets. Our results indicate that surgical face masks could prevent transmission of human coronaviruses and influenza viruses from symptomatic individuals.

In the early months of the COVID-19 pandemic with no designated cure or vaccine, the only way to break the infection chain is self-isolation and maintaining the physical distancing. In [5], Seyed S presented a potential application of the Internet of Things (IoT) in healthcare and physical distance monitoring for pandemic situations. The proposed framework consists of three parts: a lightweight and low-cost IoT node, a smartphone application (app), and fog-based Machine Learning (ML) tools for data analysis and diagnosis. The IoT node tracks health parameters, including body temperature, cough rate, respiratory rate, and blood oxygen saturation, then updates the smartphone app to display the user health conditions. The app notifies the user to maintain a physical distance of 2 m (or 6 ft), which is a key factor in controlling virus spread. In addition, a Fuzzy Mamdani system (running at the fog server) considers the environmental risk and user health conditions to predict the risk of spreading infection in real time. The environmental risk conveys from the virtual zone concept and provides updated information for different places. Two scenarios are considered for the communication between the IoT node and fog server, 4G/5G/WiFi, or LoRa, which can be selected based on environmental constraints. The required energy usage and bandwidth (BW) are compared for various event scenarios. The COVID-SAFE framework can assist in minimizing the coronavirus exposure risk.

The control of epidemics such as COVID-19 can be managed effectively by exploiting edge computation through the 5G wireless connectivity network. The implementation of a hierarchical edge computing system provides many advantages, such as low latency, scalability, and the protection of application and training model data, enabling COVID-19 to be evaluated by a dependable local edge server. In addition, many deep learning (DL) algorithms suffer from two crucial disadvantages: first, training requires a large COVID-19 dataset consisting of various aspects, which will pose challenges for local councils; second, to acknowledge the outcome, the findings of deep learning require ethical acceptance and clarification by the health care sector, as well as other contributors. In [6], M. ShamimHossain et al proposed a B5G framework that utilizes the 5G network's low-latency, high-bandwidth functionality to detect COVID-19 using chest X-ray or CT scan images, and to develop a mass surveillance system to monitor social distancing, mask wearing, and body temperature. Three DL models, ResNet50, Deep tree, and Inception v3, are investigated in the proposed framework. Furthermore, blockchain technology is also used to ensure the security of healthcare data.

Existing research shows that deep learning (DL) algorithms have been successfully used by researchers to identify COVID-19 phenomena from raw data obtained from medical IoT devices. Some examples of IoT technology are radiological media such as CT scanning and X-ray images, body temperature measurement using thermal cameras, safe social distancing identification using live face detection, and face mask detection from camera images. However, researchers have identified several security vulnerabilities in DL algorithms to adversarial perturbations. In [7], Md. AbdurRahman et al tested a number of COVID-19 diagnostic methods that rely on DL algorithms with relevant adversarial examples. The test results shows that DL models that do not consider defensive models against adversarial

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 7, Issue 1, July 2021
Impact Factor: 4.819

perturbations remain vulnerable to adversarial attacks.

"Face Detection Using Convolutional Neural Networks and Gabor Filters" [8] proposed a method for detecting facial regions by combining a Gabor filter and a convolutional neural network. The first stage uses the Gabor filter which extracts intrinsic facial features. As a result of this transformation we obtain four subimages. The second stage of the method concerns the application of the convolutional neural network to these four images. The approach presented in this paper yields better classification performance in comparison to the results obtained by the convolutional neural network alone.

Vision systems are essential in building a mobile robot that will complete a certain task like navigation, surveillance, and explosive ordnance disposal (EOD). This will make the robot controller or the operator aware what is in the environment and perform the next tasks. With the recent advancement in deep neural networks in image processing, classifying and detecting the object accurately is now possible. In [9], Convolutional Neural Networks (CNN) is used to detect objects in the environment. Two state of the art models are compared for object detection, Single Shot Multi-Box Detector (SSD) with MobileNetV1 and a Faster Region-based Convolutional Neural Network (Faster-RCNN) with InceptionV2. Result shows that one model is ideal for real-time application because of speed and the other can be used for more accurate object detection.

Li et al. [10] suggested another model for facial detection which was a MultiView Face Detector with surf capabilities. Single Shot Detector architecture is used for the object detection purpose. In this system face mask detector can be deployed in many areas like shopping malls, airports and other heavy traffic places to monitor the public and to avoid the spread of the disease by checking who is following basic rules and who is not.It takes excessive time for data loading in Google Colab Notebook. It did not allow the access of webcam which posed a hurdle in testing images and video stream. Author has modeled a facemask detector using Deep learning. We are processed a system computationally efficient using MobileNetV2 which makes it easier to Extract the data sets. We use CNN architecture for better performance. We can fix it in any kind of cameras [11].

Human beings have not tremendous ability to identify different faces than machines, so automatic face detection system plays an important role in face recognition, head- pose estimation etc. It has some problems like face occlusion, and non uniform illumination. hey use Neural Network to detect face in the Live video stream. Tensor flow is also used in this system . In existing they use Adaboost algorithm, we are using mob net CNN Architecture model in our proposed system [12].

This system consists of a dual-stage (CNN)architecture capable of detecting masked and unmasked faces and can be integrated with pre-installed CCTV cameras. This will help track safety violations, promote the use of face masks and ensure a safe working environment. Datasets were collected from public domain along with some data scraped from the internet. They use only pretrained datasets for detection. We can use any cameras to detect faces.It will be very useful for society and for peoples to prevent them from virus transmission. Here we use live video detection using open cv(python library) [13].

This process gives a precise and speedily results for facemask detection. Raspberry pi based real time face mask recognition that captures the facial image. This system uses the architectural features of VGG-16 as the foundation network for face recognition. Deep learning techniques are applied to construct a classifier that will collect image of a person wearing a face mask and no masks. Our proposed study are uses the architectural featurs of CNN as the foundation network for face detection .It shows accuracy in detecting person wearing a face mask and not wearing a face mask .This study presence a useful tool in fighting the spread of covid 19 virus [14].

Multiple solutions for detecting masked-face images have been presented in the literature or made available online over the last year. Motivated by the success of the RetinaFace face detector, for example, the so–called RetinaFace AntiCov model was introduced in [17]. The model uses a MobileNet backbone and can detect whether or not faces are masked in the detected results. Similar work using another backbone model was also presented by Khandelwal et al. in [18].

Jiang and Fan [19] proposed a one-stage face-detection model capable of classifying detected faces with respect to whether they are wearing masks or not. The proposed approach was again inspired by the RetinaNet model and

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 7, Issue 1, July 2021
IJARSCT
Impact Factor: 4.819

represents a one-stage object detector that consists of a Feature Pyramid Network (FPN) and a novel context attention module. The model comprises a backbone, a neck, and a head. The main (high accuracy) model uses a ResNet backbone, but a simpler model with a MobileNet backbone is also explored. For the neck of the model (the intermediate connection between the backbone and the heads of the model), the authors use an FPN. For the heads, the proposed approach relies on a structure similar to that used in single-stage detectors (SSD). The model is tested on selected subsets from the MAFA and Wider Face datasets that consist of a total of 7959 images with masked and unmasked faces. Despite the impressive detection performance the proposed models do not distinguish between faces that wear masks properly (in accordance with recommendations) and faces that do not. The closest to our work is the recent paper by Qin and Li [20]. Here, the authors describe an approach (SRCNet) for classifying face-mask wearing. The approach incorporates an image super resolution model that makes it possible to process low-resolution faces and a classification network that predicts whether faces are masked, without masks or if the masks are worn incorrectly. The model is trained and evaluated on a dataset that contained a total of 3835 images, which unfortunately is no longer available. Out of the 3835 images, 671 contain faces without masks, 134 images contain faces with incorrectly worn masks and 3030 images contain faces with correctly worn face-masks. An accuracy of 98.70% is reported for the proposed model. Although this work shares the basic problem statement, we do not focus solely on low-resolution faces, but explore the general task of detecting whether face-masks are worn correctly or not regardless of the data characteristics. There are also some commercial solutions available that offer face-mask detection [21, 22].

The face-mask detection feature offered by these solutions allow the simple plugging in of a video stream from a selected (surveillance) camera and then the use of vision techniques to monitor crowds and generate alerts when detecting people without masks. Baidu, on the other hand, offers an open-source tool to detect faces without masks [23]. The Baidu PaddleHub mask-detection model is based on PyramidBox, a context-assisted single-shot face detector published in 2018 [24]. The model is open-sourced to help advance the field and help to prevent and control the pandemic.

III. PROPOSED SYSTEM

Input image is first pre-processed to de-noise it. Pre-processing is a common name for operations with images at the lowest level of abstraction both input and output are intensity images. The aim of pre-processing is an improvement of the image data that suppresses unwanted distortions or enhances some image features important for further processing. Feature extraction is concentrated principally around the measurement of the geometric properties (size and shape) and surface characteristics of regions (color and texture). Classifier as name suggest classifies image from video into suspicious activity or not by comparing extracted features from dataset and input video

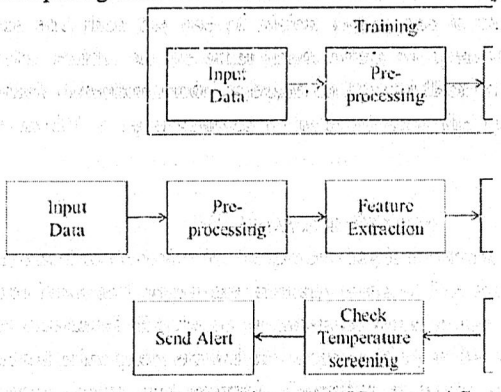


Figure 2: Architecture of Proposed System

The objective of image classification is to identify and portray, as a unique gray level (or color), the features occurring in an image in terms of the object or type of land cover these features actually represent on the ground. Classification (or classified whether the person is wearing mask or not) of activity is performed using CNN algorithm. Temperature screening and mask detection is as follows:

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 7, Issue 1, July 2021
Impact Factor: 4.819

To Measure Temperature using infrared thermometers:

- To measure a person's surface temperature with the use of non-contact infrared thermometers. It may be used to reduce cross-contamination risk and minimize the risk of spreading disease.
- While typically 98.6°F (37.0°C) is considered a "normal" temperature, some studies have shown that "normal" body temperature can be within a wide range, from 97°F (36.1°C) to 99°F (37.2°C).
- The temperature measurement subsystem based on Arduino Uno measures person's temperature using contactless IR sensor.
- The person will pass one by one. In case that person's temperature exceeds average human body (37 °C), then Arduino Uno generates signal which will generate the message and alarm will go ON.
- Measures temperature and displays a reading rapidly.
- Provides ability to retake a temperature quickly.
- To detect face mask using CNN:
- CNNs are used for image classification and recognition because of its high accuracy. ... The CNN follows a hierarchical model which works on building a network, like a funnel, and finally gives out a fully-connected layer where all the neurons are connected to each other and the output is processed.
- Steps for mask detection are:
- Building/accessing Face mask dataset:
- Data Pre-processing
- Training the Convolutional Neural Network
- Detect the masks

IV. RESULT

V. CONCLUSION

According to data obtained by the World Health Organization, the global pandemic of COVID-19 has severely impacted the world and has now infected more than eight million people worldwide. Wearing face masks and following safe social distancing are two of the enhanced safety protocols need to be followed in public places in order to prevent the spread of the virus. To create safe environment that contributes to public safety, we propose an efficient computer vision based approach focused on the real-time automated monitoring of people to detect face masks and screen temperature in public places by implementing the model using infrared thermometer and detect mask through camera. We can use better pre-processing technique to eliminate noise from information so that in further processes like classification and prediction noise doesn't make any impact. Coughing and Sneezing Detection: Chronic coughing and sneezing is one of the key symptoms of COVID-19 infection as per WHO guidelines and also one of the major routes of disease spread to non-infected public. In order to supervise large mobs, an effective solution is important and this

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 7, Issue 1, July 2021
IJARSCT
Impact Factor: 4.819

system focuses on that. Using installed CCTV and drones, authorities can keep a track of human activities and control large crowd to come together and prevent violating the law.

REFERENCES

[1]. International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429 Volume 8 Issue VII July 2020- Available at www.ijraset.com ©IJRASET: All Rights are Reserved 1368 Deep Learning based Safe Social Distancing and Face Mask Detection in Public Areas for COVID19 Safety Guidelines Adherence ShashiYadav

[2]. NenadPetrović and ĐordeKocić, "IoT-based System for COVID-19 Indoor Safety Monitoring", September 2020 Conference: IcETRAN 2020

[3]. RETINAFACEMASK: A Face Mask Detector Mingjie Jiang Xinqi Fan Hong YanarXiv:2005.03950v2 [cs.CV] 8 Jun 2020

[4]. N. H. Leung, D. K. Chu, E. Y. Shiu, K.-H. Chan, J. J. McDevitt, B. J. Hau, H.-L. Yen, Y. Li, D. KM, J. Ip et al., "Respiratory virus shedding in exhaled breath and efficacy of face masks."Brief Communication https://doi.org/10.1038/s41591-020-0843-2Nature Medicine | www.nature.com/naturemedicine

[5]. Vedaei, Seyed S.; Fotovvat, Amir; Mohebbian, Mohammad R.; Rahman, Gazi M.E.; Wahid, Khan A.; Babyn, Paul; Marateb, Hamid Reza; Mansourian, Marjan; Sami, Ramin (2020). COVID-SAFE: An IoT-based System for Auto-mated Health Monitoring and Surveillance in Post-Pandemic Life. IEEE Access, (), 1–1. doi:10.1109/ACCESS.2020.3030194

[6]. Hossain, M. Shamim; Muhammad, Ghulam; Guizani, Nadra (2020). Explainable AI and Mass Surveillance System-based Healthcare Framework to Combat COVID-19 like Pandemics. IEEE Network, (), 1–7. doi:10.1109/MNET.011.2000458

[7]. Rahman, Abdur; Hossain, M. Shamim; Alrajeh, Nabil A.; Alsolami, Fawaz (2020). Adversarial Examples â " Security Threats to COVID-19 Deep Learning Systems in Medical IoT Devices. IEEE Internet of Things Journal, (), 1–1. doi:10.1109/JIOT.2020.3013710

[8]. BogdanKwolek, "Face Detection Using Convolutional Neural Networks and Gabor Filters", Artificial Neural Networks: Biological Inspirations - ICANN 2005, 15th International Conference, Warsaw, Poland, September 11-15, 2005, Proceedings, Part I

[9]. Object Detection Using Convolutional Neural Networks Reagan L. Galvez, Argel A. Bandala, Elmer P. Dadios, Ryan Rhay P. Vicerra, Jose Martin Z. Maningodoi:10.1109/TENCON.2018.8650517

[10]. Howard, Andrew & Zhu, Menglong& Chen, Bo &Kalenichenko, Dmitry & Wang, Weijun&Weyand, Tobias &Andreetto, Marco & Adam, Hartwig. (2017). MobileNets: Effective Convolutional Neural Networks for Mobile Vision Applications

[11]. Raza Ali, Saniya Adeel,Akhyar Ahmed Face Mask Detector July 2020

[12]. A.Kumar,A.Kaur,M.Kumar,Face detection techniques: review, Artificial intelligence review,volume.52 no.2pp.927- 928,2019.D.H.Lee,K.-L.CHEN,K.H Liou,C.Liu,andJ.Liu,Deep learning and control algorithms of direct perception for autonomous driving,2019.

[13]. Amit Chavda,jasonDsouza,SumeetBadgujar Multi-Stage CNN Architecture for Face Mask Detection September 2020

[14]. Sammy v. militante,Nanettev.dionisioReal time face mask recognition with alarm system using deep learning 2020 11th IEEE control and system graduate research colloquium

[15]. Moriyama, M.; Hugentobler, W.J.; Iwasaki, A. Seasonality of respiratory viral infections. Annu. Rev. Virol. 2020, 7, 83–101.

[16]. Yang, J.; Reuter, T. Three Ways China Is Using Drones to Fight Coronavirus; World Economic Forum: Geneva, Switzerland, 2020; Volume 16. 5. Gupta, P.; Agrawal, D.; Chhabra, J.; Dhir, P.K. IoT based smart healthcare kit. In Proceedings of the IEEE 2016 International Conference on Computational Techniques in Information and Communication Technologies (ICCTICT), New Delhi, India, 11–13 March 2016; pp. 237–

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 7, Issue 1, July 2021
Impact Factor: 4.819

242.

[17]. RetinaFace Anti Cov Face Detector. Available online: https://github.com/deepinsight/insightface/tree/master/detection/ RetinaFaceAntiCov (accessed on 26 November 2020).

[18]. Khandelwal, P.; Khandelwal, A.; Agarwal, S. Using Computer Vision to enhance Safety of Workforce in Manufacturing in a Post COVID World. arXiv 2020, arXiv:2005.05287.

[19]. Jiang, M.; Fan, X. RetinaMask: A Face Mask detector. arXiv 2020, arXiv:2005.03950

[20]. Qin, B.; Li, D. Identifying Facemask-wearing Condition Using Image Super-Resolution with Classification Network to Prevent COVID-19. Sensors 2020, 20, 5236. [CrossRef]

[21]. Trident. Face Mask Detection System Using Artificial Intelligence. Available online: https://www.tridentinfo.com/face-maskdetection-systems (accessed on 26 November 2020).

[22]. Leewayhertz. Face Mask Detection System Using Artificial Intelligence. Available online: https://www.leewayhertz.com/facemask-detection-system (accessed on 26 November 2020).

[23]. Udemans, C. Baidu Releases Open-Source Tool to Detect Faces without Masks. Available online: https://technode.com/2020/0 2/14/baidu-open-source-face-masks (accessed on 26 November 2020).

[24]. Tang, X.; Du, D.K.; He, Z.; Liu, J. Pyramidbox: A context-assisted single shot face detector. In Proceedings of the European Conference on Computer Vision (ECCV), Munich, Germany, 8–14 September 2018; pp. 797–813.

DOI: 10.48175/IJARSCT-1678

HOD
Department of Information Technology
Smt. Kashibai Navale College of Engineering
Vadgaon, (Bk.), Pune - 411 041

|| Volume 5 || Issue 12 || April 2021 || ISSN (Online) 2456-0774
INTERNATIONAL JOURNAL OF ADVANCE SCIENTIFIC RESEARCH & ENGINEERING TRENDS
Multidisciplinary Journal
Double-Blind Peer Reviewed Refereed Open Access International Journal

SMART PARKING MANAGEMENT SYSTEM

Venkatesh Abbu[1] , Ganesh Madyapgol[2] , Chetan Barge[3], Prof. A. S. Narote[4]
BE (Information Technology) Smt. Kashibai Navale College of Engineering Pune, India.[1,2,3]
Assistant Professor, Smt. Kashibai Navale College of Engineering Pune, India[4]

Abstract: ***The concept of smart cities has grown in popularity in recent years. The concept of a smart city today appears to be attainable, thanks to the advent of the Internet of Things. In the realm of IoT, consistent efforts are being made to maximise the productivity and dependability of urban infrastructure. IoT is addressing issues such as traffic congestion, limited parking spaces, and road safety. We describe an IoT-based cloud-integrated smart parking system in this research. The suggested Smart Parking system comprises of an on-site deployment of an IoT module that monitors and signals the availability of each individual parking place. A smartphone application is also offered, allowing users to monitor the availability of parking spaces and book a parking slot as needed. In addition, the article provides a high-level overview of the system architecture. The paper concludes with a discussion of the system's operation in the form of a use case that demonstrates the accuracy of the provided model.***

Keywords*-Node MCU, Server, Android App.*

I INTRODUCTION

Parking in major cities, particularly in congested areas, has a direct impact on traffic flow and people's lives. PARKING is an expensive operation, both financially and in terms of time and effort expended for "free spot chasing." According to current research, an automobile spends 95 percent of its life parked and only 5 percent on the road. Using England as an example, according to the British National Travel Survey, a car was driven for 361 hours a year on average in 2014, producing about 8404 hours in which a car would be stored. Now, where are you going to park your car for the next few hours? Cruising for parking is, of course, the first issue that has arisen as a result of the global growth in auto ownership.

II LITERATURE SURVEY

Azhar Sohami ,Shubham Periwal, Kesha Patel, Pranit Gaikwad. Department computer engineering Vasai India," Cross Platform Smart Reservation Parking System As already stated Governments nowadays are focusing their efforts on educating and bringing talent forward as a way to make our country better and smarter. On the one hand, the citizens and the government are aiming for the originality of bringing ideas to the physical world with Real Time working and implementation with the notion of smart cities. It is stated that most commuters spend more time looking for parking spots than driving around with the improbable chance of actually locating parking places for themselves. The goal here is to put in place a Smart Parking Solution. Smart Parking devices will be introduced at various parking locations and will be cloud-connected, providing real-time updates from UHF placed sensors for available parking spaces for the user. The device's goal is to alleviate and remove basic problems such as traffic congestion through more realistic and useful solutions. Certain conditions, such as minimum display width and computing power, must be met. The proposed method is a "Originality" since the idea of creating smart city solutions has yet to be applied in congested areas or locations where finding parking places is challenging.

Ilhan Aydin1 , Mehmet Karakose1 , Ebru Karakose2* 1 Computer Engineering Department, Firat University 2 Civil Aviation School, Firat University Elazig, Turkey ," A Navigation and Reservation Based Smart Parking Platform Using Genetic Optimization for Smart Cities"[2]. As present Smart devices are becoming more widespread in everyday life as technology advances. The emergence of gadgets capable of connecting to the Internet and transmitting data has served as a source of inspiration for smart city ideas. The inability to find free parking spaces is a typical issue in our cities. The parking issue generates traffic congestion, and many who go to work are looking for a spot to park. A navigation and reservation-based parking proposal system for smart cities was developed in

this study. The proposed solution entails the creation of small devices that use internet of things (IoT) technology to relay data to the internet. The genetic algorithm finds the closest free parking place to the current location. The proposed method is tested for many scenarios and yields accurate results.

Pampa Sadhukhan School of Mobile Computing Communication Jadavpur University Kolkata, India – 700032." An IoT-based E-Parking System for Smart Cities"[3].As prasent The growing number of automobiles on the road, along with poor management of existing parking space, causes parking issues as well as increased traffic congestion in urban areas. As a result, it is critical to design an automated smart parking management system that will assist the driver in swiftly locating a suitable parking place for his/her vehicle. Although there have been several studies on the development of smart parking systems, the most of them have not addressed the issue of real-time detection of improper parking and automatic collection of parking fines. A prototype of an internet-of-things-based E-parking system is proposed in this research. To address the aforementioned challenges and to provide smart parking management throughout the city, the proposed E-parking system employs an integrated component known as a parking metre.

Gayatri N Hainalkar , Mousami S Vanjale Electronics department AISSMS, IoIT Pune, India Mousami S Vanjale," Smart parking system with pre & post reservation ,billing and traffic app "[4].As present Various smart applications such as smart house, smart healthcare, smart irrigation, smart street lighting, smart parking system, smart waste management system, and so on are part of the development of a smart city. A smart parking system is one of these applications, and it is an integral aspect of the so-called smart city. A smart parking system allows you to reserve a parking spot in advance, which saves time hunting for a parking spot, reduces traffic congestion, reduces pollution, reduces driver frustration, and so on. In this study, a smart parking system based on the internet of things is proposed, which not only allows drivers to book a specific parking spot but also aids in automatic cashless billing, hacking notification, and post-trip booking. The suggested system also gives traffic police with updates on each parking location, which aids in the management of urban traffic problems. The suggested system includes all of the characteristics required to improve an individual's quality of life in a smart city.

III.OBJECTIVE

The primary goal of this initiative is to lower the risk of locating parking spaces in any parking location. It reduces the need for automobiles to go across city parking lots that are already full.

IV.PROBLEM STATEMENT

With a rise in population, the number of vehicles increases, and unmanaged parking causes many problems, such as a lack of parking space and a high cost for parking reservations. To minimize this problem, we designed a system that maximizes parking resource utilisation while cutting costs, and the parking place is also within walking distance.

V. PROPOSED SYSTEM

To optimize the parking system for both parking managers and drivers, we introduce a new smart parking system with static resource scheduling, dynamic resource allocation, and pricing models. Our work has made the following contributions: 1) increased parking resource utilisation, 2) increased parking revenue, and 3) improved driver parking experience by cutting cost, parking place finding, and walking times. Our work differs from the one that proposed a dynamic resource allocation model.

VI.SYSTEM ARCHITECTURE

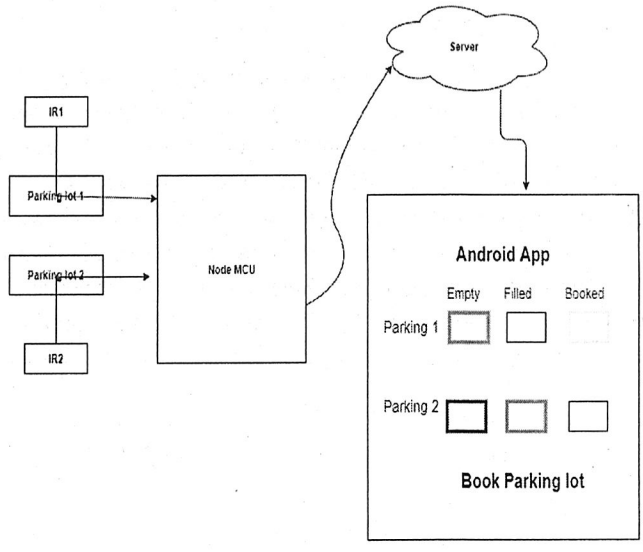


Fig1 System Architecture

VII.CONCLUSION

The implementation of a smart vehicle parking system controlled by an Android application is discussed in this study. The component used to construct the parking system provides an efficient output at various stages of implementation. This interface is established between many components and it provides the user with the easiest manner to park the car. In the future, various changes can be made based on the needs of the system, and it can be expanded to multilevel and numerous parking places by making prospective charges in the hardware configuration, making it the most effective and secure parking system.

REFERENCE

[1]Bhandari, Laxay Jain, Nalini N, "Smart Car Parking System", IJARCSSE, Volume 6, Issue 5, May 2016.

[2]D.Sathya, S.Kumaresan, "smart-parking system based on RFID AND GSM TECHNOLOGY", International Journal of Scientific & Engineering Research Volume 8, Issue 5, ISSN 2229-5518, May-2017.

[3]K.Sushma P. Raveendra Babu, J. Nageshwara Reddy, "Reservation Based Vehicle Parking System Using GSM and RFID Technology", K.Sushma et al. Int. Journal of Engineering Research and Applications, Vol. 3, Issue 5, Sep-Oct 2013, pp.495-498.

[4]G.Kiruthikamani, 2B.Abinayaa, B.Saranya, 4 P.Devi and 5R.Gayathri, "Smart Vehicle Safety System Using Arduino", International Journal of Trend in Research and Development, Volume 3(6), ISSN:2394-9333 www.ijtrd.com IJTRD | Nov-Dec 2016 Available Online@www.ijtrd.com 804

[5]Pampa Sadhukhan "An IoT-based E-Parking System for Smart CitiesYuvaraju. M, Monika. M, "IOT based vehicle parking place detection using arduino" IJESRT, ISSN: 2277-9655, May, 2017.

[6] Fox, G. C., Kamburugamuve, S., & Hartman, R. D. (2012, May).Architecture and measured characteristics of a cloud based internet of things. InCollaboration Technologies and Systems (CTS), 2012 International Conference on (pp. 6-12). IEEE.

[7] Han, D. M., & Lim, J. H. (2010). Smart home energy management system using IEEE 802.15. 4 and zigbee. Consumer Electronics, IEEE Transactions on, 56(3), 1403-1410.

[8].Parwekar, P. (2011, September). From Internet of Things towards cloud of things. In Computer and Communication Technology (ICCCT), 2011 2nd International Conference on (pp. 329-333). IEEE.

[9].Rao, B. B. P., Saluia, P., Sharma, N., Mittal, A., & Sharma, S. V. (2012, December). Cloud computing for Internet of Things & sensing based applications. In Sensing Technology (ICST), 2012 Sixth International Conference on (pp. 374-380). IEEE.

[10].Suciu, G., Vulpe, A., Halunga, S., Fratu, O., Todoran, G., & Suciu, V. (2013, May). Smart cities built on resilient cloud computing and secure internet of things. In Control Systems and Computer Science (CSCS), 2013 19th International Conference on (pp. 513-518). IEEE.