

#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### Criteria 1.3: Curriculum Enrichment

1.3.3 Percentage of students undertaking project work/ field work/ internships (Data for the latest completed academic year) -2020-21

Department of Electronics Engineering

#### **INDEX**

Sr No	Activities	Page No			
	A. Sample List of Students Undertaking				
1	Internships 2020-21	<u>2</u>			
2	Field Projects (2020-21)	13			
3	Mini Projects (2020-21)	<u>20</u>			
	B. Samples of Completion Certificates				
1	Internship Completion Certificates	<u>30</u>			
2	Field Project Completion Certificates 58				
3	Mini Project Completion Certificates	<u>68</u>			
	C. Sample Communications & Reports				
1	Internship Communications & Report				
2	Field Project Communications & Report	<u>86</u>			
3	Mini Project Report 98				



#### **Institute of Technology**

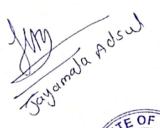
(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

A 1-Sample List of Student Internships 2020-21



## Institute of Technology

		Electronics Inte	rnships 2020-21	
Name of the student	Name of the Company	Start Date of the internship	End Date of the internship	Description of project or Internship
Paras Dhanaji Dhekale	Absolute Motion Pvt Ltd	10/29/2020	11/29/2020	The internship was an online industrial internship on PLC, HMI & Servo Drive programming along with Servo commissioning and selection.
Harshal Jouras	Gustovalley Technovations	2/21/2021	3/21/2021	Industry 4.0
Kishori Lad	Maker's Asylum	12/7/2020	4/18/2021	The program is called as SDG School 2020 where I worked on a Sustainable goal with team of 8 people.
Amey Mukesh Sonje		5/28/2020	7/28/2020	Designed solution for Sanitization in a residential apartment and ensure minimal risk of Covid-19
Sumedh Bane	Gustovalley Technovations	2/21/2021	3/21/2021	Iot, Web Development
Jim Cheriyan	Suven Consultants & Technology Pvt. Ltd.	4/6/2020	5/5/2020	Developed 6 websites using HTML, CSS, Javascript & Bootstrap
Grusha Shetty	Gustovalley technovations	2/21/2021	3/21/2021	Industry 4.0
Vraj Nilesh Mehta	Analyte Controls	8/18/2020	2/27/2021	Power Controllers, Temperature Controllers, PCB Soldering
Vaibhav Ghaisas	Entuple Technologies	6/23/2020		Design and verification in Verilog
Vaibhav Ghaisas	Entuple Technologies	7/8/2020		Custom IC Design
Vaibhav Ghaisas	Entuple Technologies	8/1/2020		Physical Design and Verification
	Goldman Sachs	4/13/2021		It's related to crack leaked password database
Sudhanshu Amrish Mishra	#WEARECRAZY	6/9/2020	6/17/2020	Digital Marketing







#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

A 2-Sample List of Student Field Projects 2020-21



### **Institute of Technology**

Group No.	Roll No.	Student Name	Mentor	Project Title
	13	Aadi Fernandes	1 1 2	Location
	23	Rashi Parmar		Identification
	22	Aaryaa Padheyagurja		& Message Transmission
	49	Nishit Barot	Mr. Yogesh	Alerting
1	28	Ramkrishna Sahu	Pandit	System
	10	Isha Chawan		
	67	Ankit Talele	-	Blood Bank
	14	Yashwant Gaddam	Dr. Asawari	Management
2	. 30	Sumedh Shinde	D.	System
	59	Neeraj Patil		
	58	Sopinath Patokar		
	60	vaidehi Phaltankar	225222	IOT based lock
	24	Nikita Patel		with predictive
3	17	Reeti Kothari	Joshi	maintenance
	48	Paarth Arkadi		- 15
	51	Ankit Deopurkar		Dispatch Bay
	56	Vaibhav Ghaisas	Mr. Abhijeet	Automation
4	50	Parth Baveja	Shete	System
	62	Rithika Ranadive		Trajectory and
	52	Hrishikesh Dey		Velocity Planning for
	21	Atharva Nadkarni	Mr. Abhishek	Autonomous
5	12	Itisha Dalvi	Chaudhari	Vehicles
	55	Mayuresh Gawde		
	7	Nimish Bitla	- 2- 1	Fake News Detection using
	53	Siddhant Easwar	Dr. P.	machine
6	26	Umedsingh Rathod	Birajdar	learning
	15	Hitesh Jethani		smart switch
	1	Raashid Ansari		board using self-designed
	8	Kamal Singh Chauha	Mrs. Sarika	programmable
7	3	Manzil Baruah	Kuhikar	device





### **Institute of Technology**

	70	Shubham Chavan		
	71	Nikhil More		Raspberry Pi based Reader
	41	Shubham Lokhande	Mrs. Amrita	for Visually
8	42	Sainath Madhavi	Jhaveri	Impaired
		270		
	4	Bhavita Bhoir		Collector &
	5	Shivani Birwadkar	Mrs.	Segregator Robot - used
	69	Nemisha Vikamsey	Anushree	for beach
9	9	Siddhesh Chavan	Prabhu	cleaning
-	54	Amogh Gajare		Modelling of
	68	Yogesh Tembe		Electronic Circuits and
	65	Amey Sonje	Dr. Rajani	Behavioral
10	63	Sayli Sawant	Mangala	Analysis
	11	Jim Cheriyan		Reading of A
	20	Rishabh Maniyar		Meter based on Image
	29	Viraj Sapte		Processing
11	33	Rahul Vemuri	Dr. Abhay K.	Technology
	18	Atique Kudchi	1	
	25	Girish Pawar		Investigation of
	2	Vaibhav Bagul	Mrs.Kavita	material
12	32	Rutik Thorat	Tiwari	deformation
	1			
		A ditus surveyanshi	<u> </u>	
	66	Aditya suryawanshi	2.1.21	
	66	Rahul Powar		
12	66	Rahul Powar Nishant Sulgudle	Mrs. Naveeta	e-Inventory
13	66	Rahul Powar	Mrs. Naveeta Kant	e-Inventory Management
13	27	Rahul Powar Nishant Sulgudle Kailash Shirke		
13		Rahul Powar Nishant Sulgudle Kailash Shirke Shrey Sagar		Management
13	27	Rahul Powar Nishant Sulgudle Kailash Shirke	Kant	Management  Patient Health
	27	Rahul Powar Nishant Sulgudle Kailash Shirke Shrey Sagar Tanya Bisht		Management  Patient Health Monitoring
13	27 6 19	Rahul Powar Nishant Sulgudle Kailash Shirke Shrey Sagar Tanya Bisht Avadhoot Likhite	Kant  Mrs. Dipti	Management  Patient Health
	27 6 19	Rahul Powar Nishant Sulgudle Kailash Shirke Shrey Sagar Tanya Bisht Avadhoot Likhite	Kant  Mrs. Dipti	Management  Patient Health  Monitoring  System
	27 6 19 34	Rahul Powar Nishant Sulgudle Kailash Shirke Shrey Sagar Tanya Bisht Avadhoot Likhite Asmita Avhad Shubham kokate	Kant  Mrs. Dipti	Management  Patient Health Monitoring System  Notice Board Operated
	27 6 19 34	Rahul Powar Nishant Sulgudle Kailash Shirke Shrey Sagar Tanya Bisht Avadhoot Likhite Asmita Avhad	Kant  Mrs. Dipti	Management  Patient Health Monitoring System  Notice Board







### **Institute of Technology**

		Surksha Kawana		
	16			
	35	Komal Kamble	Mrs.	
	38	Shreeniket Khanolkar	Jayamala Honmane	Third eye for blind
16	57	Simran Mayekar	Honmane	Dinid
	40	Tirthe Vulne	, , , , , , , , , , , , , , , , , , , ,	- 1 ,
	40	Tirtha Kulpe Asif Khan		
	37	Shubhankar kawale	Mrs. Gauri	Automatic PCB
	36	Direction	Sahoo	drilling machine
17	47	Vivek yadav		machine
	18	Suraksha Lund	-	_
	13	Nidhi Jain		
	12	Arpit Kumar		Smart Blind Stick
40	27	Anushka Rajwade	Mrs. Dipti Karani	Stick
18			Karani	
	60	Ananthu moolayil,		
	32	Nameira shaikh	1	
	33	Bhavesh Sharma	Mrs. Amrita	Evaluation of Vocal Fold
19	65	Abhishek Singh	Jhaveri	Voice Disorder
19	- 03	Abilishek Singi	0.1	
	15	Tanmay Kothale,		IoT based
	5	Kunal Bhor	1	inventory management
	54	Anshul Chimnani	1	system for
	69	Vaibhav Talwadker	Mr. Yogesh	supermarkets
20			Pandit	
	25	Amog Prabhu,	1	7
	26	Amrutlal Rajbhar	_	
	30	Devesh Sety	Mrs. Dipti	UVC Janitor
21	11	Karthik Gowda	Karani	Bot
* 1	2	Mohini Batra,		Post car crash analysis and
	41	Sai Bhosle	_	emergency
	48	Sana Mir	Dr. Asawari	rescue alert
22	53	Sonali Bhalerao	Dudwadkar	system
	3	Sanket Bhegde	_	,
	21	Shweta More	4	1.11
	44	Mrinali Dole	Mrs. Sarika	Smart Farmin







## **Institute of Technology**

23	36	Pranjali Thorat	Kuhikar	System
		,		
	17	Paras Lokare		
	19	Siddesh Mahadik		Decemberrable
	51	Sehla Pathan	Mrs. Jaymala	Reconfigurable S.A.R. And
24	29	Harsh Sawardekar	Honmane	Pipeline ADC
	56	Chetan Dharmik		
	61	Sakthivel Nadar		Virtual
	63	omkar patil	Mr. Abhishek	Telepresence
25	45	amey gaikar	Chaudhary	Robot
-	55	Tarit das		
	66	Sakshi Suryawanshi	-	
	47	Tejas kothawade	Dr. Rajani	Inventory
26	43	Rajeshwari dolas	Mangla	Management
-				
	35	yashraj thakur,		
	40	sushant yamgar	-	
	24	kedar potdar		
	7	Aishwarya chourasia	Mrs. Gauri	Dual Axis Solar
27	8	Geetika chumber	Sahoo	Tracker
	10	Tanmai Govindan	1	Telemedical
-	14	Sarvesh Khapre		Application
£ ,	37	Dhanesh Vakte	Mrs. Kavita	For remote
28	4	Aditya Bhoir	Tiwari	patients
	12	Abbiebek Debes		Intelligent
7	42	Abhishek Bohra Varun Anand	1	Traffic Routing
	38		-	And
	9	Faaiz Dastagir	Ms. Rakhi Jadhay	Congestion Relief
29	28	Atharvaa Sawant	Jadnav	Relief
	62	Shrikrishna Pai	<u> </u>	11
	57	Atharva Ghodegaoka	<del>,</del>	Fully
	23	Varun Pillai	7	Automated
30	49	Siddhant Pai	Dr. Abhay kshirsagar	Society Using
30	49	Siddhant Lai		101
	1	Sumesh Alur		Social Distance
	16	Harsh Kotwal	1	Detection Usin
-	OF			Image







## Institute of Technology

	22	Dhruv Nambiar	Mrs. Naveeta	Processing
31	20	Aditya Maniar	Kant	Tools
	68	Vishwajit Bajirao Was	Ye .	Automatic
, holy	39	Divyanshu Yadav		Accident
	64	Omkar Pawar	Mr. Abhijeet	Detection And
32	67	Harsh Tandale	Shete	Rescue
	58	Kalyani Ingole		Sign Language
	59	Pradnya Kirve	Dr.	Vocalisation Technique For
	46	Nidhi Hegde	Parmeshwar	Dumb And
33	50	Jigar Pandya	Birajdar	Deaf
	52	Shrusti Sawant		Checking
	31	Manthan Shah	Mara	Network Vulnerabilities
	34	Sneha Shekar	Mrs. Anushree	adn sending
34	6	Aniket Chavan	Prabhu	SQL Injections







#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

## A 3. Sample List of Student Mini Projects 2020-21



## Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

	Third Year Electronics	Engineering Mini Projects 2020-21
Roll No	Name of students	Project Title
31	Vedhas Kudtarkar	
38	Manas Maskar	CMOS Ring Oscillator
39	Tanishq Mengi	
	Pratibha Bhat	
	Pratiksha Bhat	CMOS Schmitt trigger
	Bhairavi Chavan	CMOS Schillitt trigger
	Kedar Deshpande(grp Leader)	
63	3 Anant Singh	
61	Abhishek Singh	Barrel shifter
4	Sandesh Pal	
		Binary multiplier
	Ritevik Bisht	
	Shubham Bhosale	simple stopwatch using multisim
1.	Rohit Deshpande	
		jk using emos
	2 Divya Awate	
T	Ayush Chaurasiya	Traffic light Controller using 4017BP_10
	Pranay Gaikwad	4 Bit Up Counter using J-k Flip-flop in
2	Pranita Jadhav	Static CMOS configuration
	6 Bherwani Jasraj Anil	
	6 Ghugare Gauray	Oundreture G
	7 Varun Prasad Gokhale	Quadrature Generator
	2 Jagushte Shlok Mangesh	Edge Triggered D Flip Flop
		1 - ge 11 ggereu D Filip Filip
2	6 Nikhil Joshi	
	3 Jayesh Mahajan	CMOS Full Adder
	0 Shubham Metkar	
4	2 Harshad Nehate	CMOS 3bit Binary To Square of the give
3	0 Parth Kharkar	
	4 Archita Malgaonkar	ripple counter



DI. P. B. Broy DEPT. OF ETRX OF ETRX OF



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

46	Anushka Pandit	
47	Prathamesh Parab	Јк Пір Пор
25	Vikram Kumar jha	
32	Aditya limkar	Impedance of MOSFET Amplifier
43	srujan pailwar	
		CMOS OR Gate
		A STATE OF THE STA
36	Pallavi Mane	CS amplifier with Current Mirror
41	Shubham Nanche	
35	Chaitanya Mali	
29	Kartikeya Kaushik	1 bit magnitude comparator using CMO
57	Vaibhav Sharma	
58	Mithun Shenoy	Motor driver circuit using MOSFET
66	vivek tarachandani	
68	Himanshu Upadhyay	4 bit barrel shifter
20	namrata jadhav	2:4 Decoder circuit using NMOS pass
28	gauri karale	transistor logic
	rohini mane	
45	pradumna palav	mosfet as multivibrator
49	Neeraj Patil	
	Neeraj Patil Priti Prajapati	CMOS integrator
52		CMOS integrator
52 63	Priti Prajapati	CMOS integrator  Buck Convertor
52 63	Priti Prajapati Aditya Tamse	
52 63 64	Priti Prajapati Aditya Tamse	
52 63 64 53	Priti Prajapati Aditya Tamse Divya Singh	
52 63 64 53 55	Priti Prajapati Aditya Tamse Divya Singh Sahil Ram	Buck Convertor  CMOS And Gate
52 63 64 53 55 56	Priti Prajapati Aditya Tamse Divya Singh  Sahil Ram Shubham Sangale Prajot Sapkal	Buck Convertor
52 63 64 53 55 56	Priti Prajapati Aditya Tamse Divya Singh Sahil Ram Shubham Sangale	Buck Convertor  CMOS And Gate  Password Security System using Logic
52 63 64 53 55 56 59	Priti Prajapati Aditya Tamse Divya Singh  Sahil Ram Shubham Sangale Prajot Sapkal Aditya Shetty	Buck Convertor  CMOS And Gate  Password Security System using Logic Gates
52 63 64 53 55 56 59	Priti Prajapati Aditya Tamse Divya Singh  Sahil Ram Shubham Sangale Prajot Sapkal	Buck Convertor  CMOS And Gate  Password Security System using Logic
52 63 64 53 55 56 59	Priti Prajapati Aditya Tamse Divya Singh  Sahil Ram Shubham Sangale Prajot Sapkal Aditya Shetty  Aaryan Agrawal	Buck Convertor  CMOS And Gate  Password Security System using Logic Gates  music sensitive LED device using
52 63 64 53 55 56 59	Priti Prajapati Aditya Tamse Divya Singh  Sahil Ram Shubham Sangale Prajot Sapkal Aditya Shetty  Aaryan Agrawal Balaji Krishnan	Buck Convertor  CMOS And Gate  Password Security System using Logic Gates  music sensitive LED device using MOSFET
52 63 64 53 55 56 59	Priti Prajapati Aditya Tamse Divya Singh  Sahil Ram Shubham Sangale Prajot Sapkal Aditya Shetty  Aaryan Agrawal Balaji Krishnan Ayush Gaur	Buck Convertor  CMOS And Gate  Password Security System using Logic Gates  music sensitive LED device using
52 63 64 53 55 56 59 1 3 15	Priti Prajapati Aditya Tamse Divya Singh  Sahil Ram Shubham Sangale Prajot Sapkal Aditya Shetty  Aaryan Agrawal Balaji Krishnan Ayush Gaur	Buck Convertor  CMOS And Gate  Password Security System using Logic Gates  music sensitive LED device using MOSFET



Pist Breider





### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

	Chinmay Prabhughate	
54 \	arad Rane	Carry look ahead adder
	P	The state of the s
	Aishwarya Dandge	Simulation of 6 transistor SRAM cell
	Sakshi Gujarathi	using CMOS
	Vaishnavi H	LANCOR D. LA POM A
60 1	Mrunali Shingre	4 * 4 NOR Based ROM Array
62	Adarsh Singh	
67 1	Prabal Tripathi	nMOS Subtractor (Final Topic preferred)
	Satyam Vishwakarma	
	Pravin Yadav	T flip flop using CMOS
24	Suman Jha	
	Dhanesh Kajrolkar	S-R flip flop
2/	Dnanesh Kajroikar	S-K IIIP IIOP
4	Ansari Mohd Rameez	
9	Varun Bhatia	Ring counter
12	Vedant Chaudhari	
1	Amey Advirkar	
	Ramchandra Balankar	
	Shalaka Gamare	MODL Adder
54	Abhishek Samudre	CMOS clocked SR flip-flop
61	Aman Shukla	김 얼마리 얼마 얼마나 되었다. 그렇다 나는다
68	Raj Talashilkar	
26	Gayatri Jadhav	
	Saurav Pandit	
	Akshay Patil	Full adder implementation using pass tra
	Shyam Munankar	
	Siddhi Anbhule	To U.A. d.d using 2.9 deceder 1hit
33	Shubham Kaspale	Full Adder using 3:8 decoder 1bit
50	Rayan Shaikh	
	Rutuja Shejwal	
	Jaie Vengurlekar	Sense Amplifier



PALP BY DEPT. OF ETRX OF ETRX OF



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

25	Sanika Indulkar	
29	Harshal Jouras	CMOS Schmitt Trigger
44	Manasi Patankar	
8	Sumedh Bane	CMOS Ring Oscillator
11	Shubham Chaudhari	
13	Dhruvi Chauhan	
20	Atharva Godse	
	Rohit Gwalani	
	Preet Jain	1:2 Demux
	Treetoani	1.2 Demux
21	Shashwat Gupta	
66	Harsh Singh	1
	Tushar Wanave	SISO 2-bit shift register
	Shatrunjay Palkar	Nor Based rom array
	Shruti Parab	
47	Siddhesh Patkar	
14	Ritik Choudhary	4x4 nand based rom array
	Manav Dulani	
41	Hrithik Parab	1
4	12 Ta	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
55	Suyog Sawant	NOR based Column Decoder
63	Aman Singh	
51	Aditya Rode	
<del></del>		
	Kanchan Bajaj	D 111
	Jayant Chaudhari	Positive triggered
34	Kishori Lad	D flip flop
2	Sahil Amundkar	
5	Prashanth Arundudhiyar	2. Full Subtractor using CMOS
	Paras Dhekale	
56	Rahul Seth	4:1 MUX using Pseudo nmos
	Suresh Hotwani	
17	Harshad Gadage	



PBI BIY OF DEPT. OF ETRX OF ETRX NO.



### **Institute of Technology**

40	Kaustubh Pandey	1. 6-T SRAM Cell
48	Ketaki Purohit	
57	Dhairya Shah	
52	Rishabh Sajin	1 bit magnitude comparator using CMOS
58	Srishti Sharma	
60	Grusha Shetty	
35	sudhanshu mishra	2-bit asynchronous counter
46	Gautami Patil	
62	Vimal Shukla	
64	Astha Singh	amos logia implementation of the state
	Deepti Singh	cmos logic implementation of 4*2 priority
	Harsh Raut	
24	Roshan Indulkar	JK Flip Flop Using CMOS
38	Vivek palande	
19	Pranil ghadi	
36	Ratul Kumar Modak	1 bit shift Register
31	Samruddha Kalke	
28	Chaitanya Joshi	Barrel Shifter
	Abhijeet Kale	
32	Sudhanshu Karwa	
	Nishant Suryawanshi	
69	Abhishek Tupe	2:4 decoder dynamic design style
53	Ashish Salunkhe	

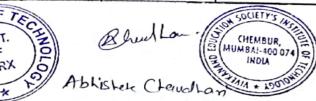






### **Institute of Technology**

El	ectronics Second	rear Mini Proj	ects 2020-21	
Group No.	Name of the Student		Title of the Proje	No. of Students
	Aakash Dubey Siddhesh Dahiphale Sahil Matlai Aditya Ghadge	Dr. P.	DTFM based	
1		Birajdar	automation	4
2	Chaitanya brid Vipul vishe shraddha mane Rugved pawar	Mrs. Anushree Prabhu	Traffic light control system using 8051	4
3	Sanket Harmalkar Hrushikesh Lad Vishal Jangam Samay Gadade	Dr. Rajani Mangla	Smart Health Monitoring System	4
4	CHANDAN ADSUL ROHIT MORE AMAAN SHAIKH UTKARSHA KHARAT			
	ZIYAUL MUSTAFA	Mrs. Sarika Kuhikar	Bidirectional Visitor Counter	5
5	BHAIRAVI JOSHI MANASI NERURKAR OM SHETTY SARITHA THARAKAN	Dr. Rajani Mangala	IoT based Smart Intravenous Drip Bottle Level for Healthcare	4
	ADITYA SINGH DEVANSH SINGH SHUBHAM SHANBHAG	3		





## Institute of Technology

6	PRATIKSHA MHADGUT	Mrs Naveeta Kant	Intensive cleaning Robot	4
		-	treaming 10000	
	SIDDHARTH BAGDE	- 7		
	GANESH PATEL	1		
	GAURAV	1	Solar Panel	
	SALGAONKAR	Mrs. Amrita	Rechargeable	
7	ROHAN SAWANT	Jhaveri	Light	4
				•
	GAURAV			
	AUTADE		P- 1	_
	DEEPTANSHU	]		
	DE		Smart Blind	1
	SHRIJEET DESAI	Ms. Rakhi	Stick using	
8	AVIN SHEJWAL	Jadhav	Arduino	4
				•
	KARTIK		1	
	SHANBHAG			
	ADITYA	1	1	-
	BEDEKAR	]		1
	AROHA		G	n -1 *
	ADAVADKAR		Contactless Attendance and	
	NIXIT KOTHARI	Mrs. Dipti	temperature	
9	-	Karani	checking device	4
		1		
	DAKSH			1 L 3 7 L
	PUNAMIYA	]		1
	SAKSHAM RAI			
	SANNIDHI	Mrs.		
	SHETTY	Jayamala	LED	
10	ADITYA RANA	Adsul	Thermometer	4
	ALTON CDE LEG	-		
	ALTON CREADO	1		
	TANVI SATAM		1 2 5 -1 1	
	SHRAVAN	1 - 1	- 1 - * 1	
	KAMBLE	T 10 20 20 20	Smoke Detector	
	SHREYUSHI	Mr.Yogesh	Fire Alarm	
11	VEER	Pandit	Circuit	
	100 T 1 D 1 1			
	ATHARVA	1		







## Institute of Technology

	PRACHI		T	
	BHALERAO			-
	ASHIWINI	* -	Underground	
	GAWHALE		Drainage Monitoring	
	RAJESH MUNI		System & Alert	
	HRITHIK	Dr. Abhay	Indication Using	
12	SAPKALE	Kshirsagar	Sensors.	5
	VINEET BHOLE			
	OMKAR PADHYE			
	SURABHI BYJU	Mrs. Sarika	Smart irrigation	3
13	AARYAN WANI	Kuhikar	system	4
	GAURAV	,	3,333	
	DHANDE			
	ADITI JAMWAL	1		
	AJITH NAIR	Mrs.		
	ANUSHKA	Anushree	Automatic Light	
14	KAMBLE	Prabhu	Controller	. 4
	ABHIRAM			
	PHADNIS			,
	ABHISHEK RANE		Coin Detection	
	SMRITI KARN	Mrs. Kavita Tewari	and Counting Algorithm Using	
15	FREYA MOTA	lewaii	MATLAB	4
		Mr. Abhijit	Smart Energy	
16	Soham Kolte	Shete	Saver Using	
	Anas Khan		PIR Sensor	- "
	Dhiraj Ingale		7.	4
	Poorvesh Powale			
				-
		Dr. P.	DTFM based	
17	Aakash Dubey	Birajdar	home	
T	Siddhesh		automation	- '. '
	Dahiphale	. As		
	Sahil Matlai			
	Aditya Ghadge		1	4
	1	Mrs.	Traffic light	
		Anushree	control system	
18	Chaitanya brid	Prabhu	using 8051	
	l		1	
	Vipul vishe		7.1	1 15 15 15
	shraddha mane			









### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

19	Prajyot Kamble	Ms. Rakhi Jadhav	Infra Red based Motion Detector	- '
	Harsh Jadhav		- 1	
	Abhishek sharma		2 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	
	Komal Bhongle			4
20	Andrew Jose	Mrs. Gauri Sahoo		
	Sneha Jadhav			
	Isha Girathe			
	Aaditya Gaikar	, , , , , , , , , , , , , , , , , , , ,	Quiz Buzzer	4
21	Sanket Harmalkar	Dr. Rajani Mangla		
	Hrushikesh Lad			
	Vishal Jangam			
	Samay Gadade		Smart health mor	4
22	Vraj Mehta	Mrs. Amrita Jhaveri	password based door lock system	
	Saniya Shaikh			
	Vipul Bhoir			
	Dipesh Varve			4
23	Bhakti Kambli Neha Kashid	Mr. Abhishek Choudhari	Wireless Electronic Notice Board	
= 1	VIKAS PANIGRAHY	-	using GSM	-0.
5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ANKITA MHATRE			4
24	Atharva Mauskar	Dr. Abhay Kshirsagar		
	Sagar Joshi	1-	A Late of the Control	
n 1 2 2	Nithin Murali		1 / 1 / 1	
	Kiran Ramgiri	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )		4
2:	CHANDAN 5 ADSUL	Mrs. Sarika Kuhikar	Bidirectional Visitor Counter	
	ROHIT MORE			OCULTA:

OF

CHEMBUR, MUMBAI-400 074



### **Institute of Technology**

AMAAN SHAIKH	
UTKARSHA KHARAT	4







#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### **Electronics Department First Year Mini Projects 2020-21**

Group	Name of the			No. of Students
No.	Students	Mentor Name	Title of the Project	ino. of Students
	Atharva			
	Bhaindarkar	Manisha Tiwary		
	Mayank Bhate			5
	Siddharth Dighe			
	Gauraang		Water Level	
	Prabhudesai		Indicator	
Group 1	Madhurima			
D1E	Tamhankar			
	Meghan Wagle			
			Tesla Coil (Wireless	
	Sanket Zope	Manisha Tiwary	Power Transfer)	5
	Saumya Padmane			
	Aryan Andhare			
Group 2	Om Suwarnakar			
	Aditi Mishra		Continuity Tester	4
	Ashiqa Shervegar	Manisha Tiwary		
	Jheel Panchal			
Group 3	Ashwin Katkar			
	Prathamesh			
	Gudame			4
-			To Construct an	
Group 4	Riyansh Jain	Manisha Tiwary	Amplifier using a	



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

			Transistor	
	Nachiket Suryavanshi			
	Aaryan Solkar			
		M : 1 T	Laser Security	
	Jaykumar Kabra	Manisha Tiwary	System	4
	Vedant Jadhav			
	Swaraj Patil			
Group 5	Ruchita Dolas			
			REGENERATIVE	
	Ameya Roplekar		BRAKING SYSTEM	
	Mehul Nikumbh	Manisha Tiwary		
	Sejal Bishoyi			4
Group 6	PRIYANSHU TRIPATHI			
	Avanti Bhondwe	Manisha Tiwary		
	Soham Mhatre		audio amplifier	5
	Sarvesh Hadgaonkar			
	Pooja Gangurde			
group 7	Ashwin Diwadkar			
	Abhiroop Bhattacharjee	Manisha Tiwary		
1	Hrutuja Ravindra Mestry		Digital Altimeter	4

Group-8



### **Institute of Technology**

	Sagar Akhilesh Pandey			
	Avanti Vinayak Rangdal			
	Rishabh Goray	Manisha Tiwary		
	Sumedh Savalapurkar			
			Galileo free fall	
	Vansh Setpal		object	5
	Sunny Kushwaha			
Group 9	Jayesh Bodekar			
	SHANTANU AMBHORE			
'	PRAJWAL POOJARI	Manisha Tiwary	LI-FI (LIGHT-FIDELITY) TECHNOLOGY	
	MOTEEPUR SHAIKH			
	MEKRAIL SHAIKH			
Group 10	NILESH SHARMA			5
	Sudesh Bhagat	Manisha Tiwary	Solar Street Light	
1	Aditya Darge			
	Naimatullah Mullah			5



### **Institute of Technology**

	Manmegh Pawar			
	Sanket kapoor			
	Shivam Behera	Manisha Tiwary		
	Darshan Borole		Crystal Structure	5
	Shruti Nikhare			
	Sakshi Rane			
Group 12	Sonal Shinde			
				55



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# **B** 1. Sample Internship Completion Certificates



### **Institute of Technology**





#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)







#### **Gustovalley Technovations**

#### CERTIFICATE OF COMPLETION

This Certifies that

#### **GRUSHA SHETTY**

has successfully completed Gustovalley Technovation's Online Internship on Industry 4.0 which was conducted from 21/02/2021 to 21/03/2021.

The Performance delivered during the program was Good

A. h=1

Date: 02-04-2021 Authorized Signatory

Certificate No.: GL102006



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

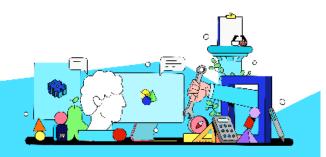
This is to certify



has been a participant at the SDG School 2020 and has successfully completed the program from **December 7th-18th 2020.** 

Eric Fait Regional Director, UNESCO Gaeli Mainguy Director, CRI Puris Malbhay Chhabra Founder, Malor's Asylum







#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)







#### **Gustovalley Technovations**

#### CERTIFICATE OF COMPLETION

This Certifies that

#### **HARSHAL JOURAS**

has successfully completed Gustovalley Technovation's Online Internship on Industry 4.0 which was conducted from 21/02/2021 to 21/03/2021.

The Performance delivered during the program was Good

A. h\_7'

Date: 02-04-2021 Authorized Signatory

Certificate No.: GL102004



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)







#### **Gustovalley Technovations**

#### CERTIFICATE OF COMPLETION

This Certifies that

#### **SUMEDH BANE**

has successfully completed Gustovalley Technovation's Online Internship on Industry 4.0 which was conducted from 21/02/2021 to 21/03/2021.

The Performance delivered during the program was Good

A. h\_1'

Date: 02-04-2021 Authorized Signatory

Certificate No.: GL102005



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)





#### INTERNSHIP CERTIFICATE

This is to certify that VAIBHAV GHAISAS

from

#### **VESIT**

has completed the Online Internship Program on

#### **DESIGN AND VERIFICATION USING VERILOG**

from 23rd June to 3rd August 2020.



Mr. Puneet Kumar Mishra Chair, IEEE Bangalore Section Secretary, IEEE India Council



Mr. Damodara M S
Business Manager,
Entuple Technologies Pvt. Ltd.



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



#### ANALYTE CONTROLS

Regd. Office: 401, Vishnu Niwas, Brahmin Society, Naupada, Thane (W) 400 602. Works: C-101, Paresh Complex, Thane - Bhiwandi Road, Kalher, Thane - 421 302. Email: analyte.sales@gmail.com Tel.: 92722 34175 Fax: 022 - 2539 2950

#### **ANALYTE CONTROLS**

103, LAXMI PALACE, NEAR GODBOLE HOSPITAL, M.G. ROAD, NAUPADA, THANE (WEST) – 400602. Tel.: 91-22-25426640.

Mob.: 8657436616.

E-mail: analytecontrols@gmail.com.

#### To whom so ever it may concern

This is to certify that Mr. Vraj Nilesh Mehta has worked in ANALYTE CONTROLS from Aug 2020 to Feb 2021.

During this Period he gain experience in Power controller, Temperature controller and PCB soldering and has done with prime responsibilities, troubleshooting and testing of control panels . During the job we found him responsible, sincere, committed and devoted to his job responsibilities.

He has been relieved from his services as per the rules and conventions of the Organization.

We wish her every success in all her future endeavours.

The state of the s

ANALYTE CONTROLS

AUTHORISED SIGNATORY



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)





#### **Sudhanshu Mishra Engineering Virtual Program**

Certificate of Completion April 15th, 2021

Over the period of April 2021, Sudhanshu Mishra has completed practical task modules in:

Crack leaked password database

Alle

Phil J. Venables Global Chief Information Security Officer Tom Brunskill CEO, Co-Founder of Forage

Enrolment Verification Code tiB5RR9JPpe4GGMt9 | User Verification Code dWwKDnEo6NjAPPvrn | Issued by Forage



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)









ONLINE SUMMER INTERNSHIP

#### CERTIFICATE

This is to certify that

Mr /Mrs / Ms Amey Sonje

from Vivekanand Education Society's Institute Of Technology, Chembur, Mumbai participated and successfully completed the project "Design solution for Sanitization in a residential apartment and ensure minimal risk of COVID-19 by using technology and tools "assigned in InTech Olympiad during Online Summer internship from 28th May 2020 to 28th july 2020

> Mr. Mahesh A. Kulkarni **AFour Technologies**

Prof. Sudhir D. Agashe





#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# **B 2-Sample Field Project Completion Certificates**



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### "Digital Notice Board Using Raspberry Pi"

Submitted in partial fulfillment of the requirements

#### of the degree of Bachelors of Engineering

bу

Student Name	Roll No.	
Shubham Kokate	31	
Sumit Mayekar	40	
Kalyani Shelar	57	
Amol Wakchaure	69	

Supervisor: Rakhi Jadhav









Department of Electronics Engineering V.E.S. Institute of Technology 2020-21



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### CERTIFICATE

This is to certify that the project entitled "Digital Notice Board Using Raspberry Pi" is a bonafide work of "Shubham Kokate (31), Sumit Mayekar (40), Kalyani Shelar (57) and Amol Wakchaure (69)" submitted to the V.E.S. Institute of Technology in partial fulfillment of the requirement for the award of the Bachelor of Engineering in Electronics.

Page 1 vac

(Name and sign)

Supervisor Guide

TUTE OF

(Name and sign)

Head of department

(Name and sign)

Co-Supervisor/Guide

TOLOGO VICE

(Name and sign)

Principal



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### Project Report Approval for B.E.

This project report entitled "Digital Notice Board Using Raspberry Pi" by Shubham Kokate. Sumit Mayekar, Kalyani Shelar, Amol Wakchaure is approved for the degree of the Bachelor of Engineering in Electronics.

Examiners

1. P. (Rakhi Jadhar

2. ouline enam







### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# **B 3-Sample Mini Project Completion Certificates**



# Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### "Automatic Light Controller"

Submitted in partial fulfillment of the requirements

Second Year Mini Project

by

Student Name Roll No.

Gaurav Dhande 19

Aditi Jamwal 23

Anushka Kamble 25

Ajith Nair 35

Supervisor:

Mrs. Anushree Prabhu







## **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

Department of Electronics Engineering V.E.S. Institute of Technology 2020-21

### CERTIFICATE

This is to certify that the project entitled "Automatic Light Controller" is a bonafide work of "Gaurav Dhande(19), Aditi Jamwal(23), Anushka Kamble(25) and Ajith Nair(35)" submitted to the V.E.S. Institute of Technology in partial fulfillment of the requirement for the completion of second year Mini Project in Electronics Engineering.

Guide

Head of Department







### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### Approval for Second Year Mini Project

This project report entitled "Automatic Light Controller" by Gaurav Dhande(19), Aditi Jamwal(23), Anushka Kamble(25) and Ajith Nair(35) is approved for completion of second year Mini Project in Electronics Engineering

ANUSHREE PRABBUY







### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# C 1-Sample Communications & Reports —Internships



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# C 2-Sample Communications & Reports-Field Project



# Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### "Obstacle Detection Using IR Proximity Sensor"

Submitted in partial fulfillment for the requirements

of completion of the Second

Year Electronics Engineering

by

Student Name	Roll No.
Abhishek Sharma	68
Harsh Jadhav	80
Komal Bhongle	84
Prajyot Kamble	88

#### Supervisor:

Rakhi Jadhav Assistant Professor





Department of Electronics Engineering WE.S. Institute of Technology

2020-21







### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### 1. INTRODUCTION

A proximity sensor basically detects the presence of any nearby object in its vicinity without making any kind of physical contact. A proximity sensor works by emitting electromagnetic beam in its angle of projection and tries to detect any kind of changes in field or any signal returning after colliding to target. There are different kinds of proximity sensor such as capacitive, inductive etc. Out of this in our project we have included the IR based proximity sensor.

An IR proximity sensor works by giving supply to a pair of IR light emitting diodes (LED's) which in turn, emit infrared light. This light propagates through the air and once it hits an object it is reflected back towards the sensor. If the object is close, the reflected light will be stronger than if the object is further away.

Usually in the infrared spectrum all the objects radiations some form of thermal radiations are invisible to our eyes, that can be detected by an infrared sensors. The emitter is simply an IR LED (light emitting diode) and the detectors is simply an IR photodiode which is sensitive to IR light of the same wavelength as that emitted by the IR LED. When IR light falls on the photodiode, the resistance and these output voltage change in proportion to the magnitude of the IR light received.

This circuitry requires very low cost components for construction. We can use this system where ever motion detection is required. Applications are in Automation systems, Theft control, Sanitizer Dispenser, etc.







### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### 2. LITERATURE REVIEW

For the literature survey of our project Motion Detection Using IR Proximity Sensor, research papers from the recent year were taken into consideration.

The following contains the summary about those papers:-

#### [1] Motion and Movement Detection for DIY Home Security System

IEEE SENSORS JOURNAL

[Published in year 2019]

In this, a home security system that is integrated with remote monitoring system is developed. It uses the technology cloud based real-time monitoring.

Depending upon wireless motion detection using a microcontroller as a sensor, the data transferred by sensor is handled by cloud server. Based upon the irregularity detected this system acts accordingly. It also deals with notifying the consumer regarding any irregularity.

Even though is affordable but involves circuit complexity, and also cannot be completely dependable considering many component involved.

### [2] Daily activity recognition using pyroelectric infrared sensors and reference structures IEEE SENSORS JOURNAL

[Published in year 2019]

This system uses pyroelectric infrared sensors. The main concept is based on human activity generating an infrared radiation field that carries the IRC(infrared radiation changes) information. By measuring the IRC signal, it is possible to recognize the activity pattern.

Here, PIR sensors are used in conjunction with Fresnel lenses, which have transmission characteristics appropriate for a particular wavelength range, e.g., the human body (5  $\sim$  14  $\mu$ m).

#### [3] Smart Lightning and Security System

IEEE SENSORS JOURNAL

[Published in year 2020]

This system mainly focuses on the concepts of energy conservation, it shows how electrical energy could be saved to a great extent if paired with some constantly monitoring systems. It highlights the concept of automation.

It comprises of PIR, IR sensors, Arduino mega2560, ultrasonic sensors, which when integrated via programming works as perfect system aiming at saving electrical energy.

Using Arduino microcontroller gives a upper hand in terms of energy management as it is readily programmable, thus can be utilized for switching purposes as the surrounding environment demands.







## **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### 4. CIRCUIT DIAGRAM

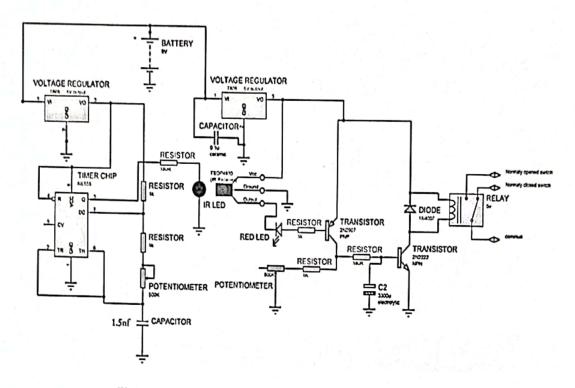


Figure 2 Circuit Diagram of IR Proximity Sensor[Source:Ref.4]





### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### 6. RESULT

In current situation where contagious pandemic is spreading all over the world we needed a touch less system, where we need less contact with any surface to protect ourselves from viruses. The system called motion sensing equipment is built to overcome the possibility of touching doors, touching sanitizing machines, temperature sensing thermometers, etc.

We built a proximity sensor to detect any movement and work accordingly such as glowing a lamp, honking a buzzer and turn on the motors, etc.

The project we built is capable of detecting the obstacle within the range of 0-10m in 180 degree span of projection by the transmitting IR radiation. This proximity sensor can be implement where ever the automation is needed.

Complete prototype is ready :-.





# **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# C 3-Sample Reports-Mini Project



# Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### "Automatic Light Controller"

Submitted in partial fulfillment of the requirements

Second Year Mini Project

by

Student Name Roll No.

Gaurav Dhande 19

Aditi Jamwal 23

Anushka Kamble 25

Ajith Nair 35

Supervisor:

Mrs. Anushree Prabhu







### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### Chapter 1: Introduction

In today's world, we cannot imagine our daily life without electricity. Electricity has become a necessity for all, without which day-to-day life chores & daily activities come to a standstill. Due to the depletion of non-renewable resources, energy conservation has become necessary by means of wind energy, solar energy and hydro energy which are renewable in nature. The utilization of these resources for power supply is the best possible way of producing, conserving and renewing energy. It is pollution free, affordable, and free from environmental impacts.

The environmental effects and depleting energy resources are a constant reminder to save non renewable resources. Energy wastage has become a common problem, seen frequently at homes, educational institutions, and industries. Fans and lights continue working even in the absence of people due to utter negligence of the inmates.

However, there is a solution to some of these problems. The digital world we are living in allows us to use different technologies to automatically perform certain tasks. Such automation is very useful in certain areas like energy consumption, reducing human efforts, improving standard of living etc. To control this negligent wastage of energy, a lighting system with an automatic room light controller can be installed to conserve energy by optimizing appliances such as lights, fans, etc.

When we enter a dark room, we often have to search for the light switch and with our busy lives we often leave the lights and fans running in the room. This results in unnecessary power wastage. An automatic room-light controller which automatically turns on the lights when a person enters into a room, and turns off the lights when the person leaves the room is a very efficient solution to our problem. By using this system, we can intentionally forget about the lights as the system will automatically take care of them.

Not just that, with this method people with a phobia of darkness will also be benefited. Parents, with small children, who dread entering a dark room for the fear of stepping on any scattered toys, will find this solution to be a blessing. Same goes for people with pets. When carrying a load of things, one doesn't need to worry about reaching the switch; your presence will be enough.

This automatic room controller is implemented using a simple 8051 microcontroller and wireless IR technology and relay for switching.

Since the job of the circuit is to turn on the light when someone enters the room and turn off the light when the last person leaves the room, the controller has to internally count the number of visitors entering and leaving the room. Hence, the project acts as an Automatic Room Lighting System as well as a Bidirectional Visitor Counter.







# **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

Chapter 4: Hardware/Software Overview:

Sr.No	Hardware Component	Description
1	AT89C51 (8051 Microcontroller)	To control the project system
2	2 x Infrared obstacle sensors	To measure and detect obstacle via infrared radiation
3	16 x 2 LCD display	To display the counter
4	5V relay module	As a switch, connects lamp to the circuit
5	Lamp	To show output
6	Connecting wires	To connect individual components and create the circuit.
7	Power supply	To enable the electric circuit.

Table 1. Tabular overview of the hardware specifications

Sr.No	Software Required	Description
1	Proteus 8 Professional	To simulate the circuit
2	Keil μVision 4.3	To write the program code in embedded C
		language

Table2. Tabular overview of the software specifications





## **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)