

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 & Telecommunication

| | INDEX | |
|-------|--|-----------|
| Sr No | Activities | Page No |
| | A. Sample List of Students Undertaking | |
| 1 | Internships 2020-21 | <u>2</u> |
| 2 | Field Projects (2020-21) | <u>10</u> |
| 3 | Mini Projects (2020-21) | <u>19</u> |
| | B. Samples of Completion Certificates | |
| 1 | Internship Completion Certificates | <u>32</u> |
| 2 | Field Project Completion Certificates | <u>61</u> |
| 3 | Mini Project Completion Certificates | <u>65</u> |
| | C. Sample Communications & Reports | |
| 1 | Internship Communications & Report | <u>68</u> |
| 2 | Field Project Communications & Report | <u>69</u> |
| 3 | Mini Project Report | <u>74</u> |



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<u>A 1-Sample List of Student Internships</u> <u>2020-21</u>



| Sr No | Electronics & Teleco Student Name | Class | | 84 |
|--|--------------------------------------|-------|--|---------------------------|
| 1 | Deepesh Shahdadpuri | D14A | Company Name | Start date to end date |
| | | DI4A | Accenture | 15/07/2020 to 13/08/2020 |
| 2 | Rohit Ambesh | D14B | CodeSpeedy technology Pvt ltd | 04/09/2020 to 04/10/2020 |
| 3 | Chirag Kapoor | D14B | CodeSpeedy technology Pvt ltd | 24/10/2020 to 24/11/2020 |
| | Chirag Kapoor | D14B | Bharat Bhagya Vidhata Blog | December 2020 - Present |
| 5 | Sumit Jadhav | D9A | Bolt-IoT | 15/02/2021 to 14/04/2021. |
| 6 | Aryan Gupta | D9B | Unschool outreach program (Community influencer) | 3/02/2021 - 23/02/2021 |
| 7 | Saachi Dudani | D14A | Brainheaters | 03/06/2020-01/05/2021 |
| 8 | Ganesh Gaonkar | D19C | TeleNetworks Technologies Private Limited | 02/2021 to 02/2021 |
| 9 | Ganesh Gaonkar | D19C | The Sparks Foundation | 03/2021 to 03/2021 |
| 10 | Ganesh Gaonkar | D19C | Deloitte Virtual internship | 04/2021 to 04/2021 |
| 11 | Varun Bhat | D14A | Verzeo | 01/08/2020 - 01/10/2020 |
| 12 | Varun Bhat | D14A | Forage-Goldman Sachs Virtual Internship | 01/11/2020- 10/11/2020 |
| | Varun Bhat | D14A | Forage-Boston Consultancy Group Virtual Internship | 12/01/2021-23/01/2021 |
| | Bhuvana Raisinghani | D14A | Applex.in | 26/07/20- 26/08/20 |
| 15 | 5 Ameya Dikshit | D9B | Bolt IoT | 12/04/21 - 11/06/21 |
| 10 | ó Pradeep Thorat | D19B | E-Cell Ambassador, FMS Delhi | Feb 2021-March 2021 |
| 17 | 7 Shubham Gupta | D14B | Arbitrium | 16/10/2020 TO 30/11/2020 |
| 18 | 8 Shubham Gupta | D14B | Internshala | 10/092020 TO 10/11/2020 |
| 19 | 9 Akshay jain | d9b | TIMES OF INDIA | 01/09/2020 to 15/10/2020 |
| 20 |) Kimaya Kolambe | D14A | Crazy for Success Foundation | 01/02/2021-14/02/2021 |
| 2 | 1 Esa Malik | D14A | Forage-Goldman Sachs Virtual Internship | 05/03/2021-05/04/2021 |
| the second secon | 2 Tanya Dubey | D9B | ACCESS Intern - Times Group | 08/07/2020 - 31/08/2020 |
| 2 | 3 Janhavi Bhagat | D14B | Science utsav | 19/03/2021- ongoing |

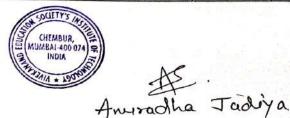


Anyradha Jadiya





| 24 | Sarth Mitragotri | D14A | Forage-Goldman Sachs Virtual Internship | 20/03/2021- 20/04/2021 |
|----|---------------------|------|---|--------------------------|
| 25 | Aditya R Achar | D14B | The Sparks Foundation | 02/2021-03/2021 |
| 26 | Fiza Khan | D19B | The Sparks Foundation | 02/2021-03/2021 |
| 27 | Chirag Kapoor | D14B | Goldman Sachs Virtual Internship Program | 03/2021 - 04/2021 |
| 28 | Ambeshkumar Mishra | D14B | The Sparks Foundation | 02/2021-03/2021 |
| 29 | Nikhil Tekchandani | D14A | Virtually Testing Foundation | 18/01/2021 - 22/03/2021 |
| 30 | Bhavesh Ramchandani | D14B | Virtually Testing Foundation | 18/01/2021-22/03/2021 |
| | Mahek Tardeja | D14A | The Sparks Foundation | 04/2021-05/2021 |
| 32 | Ritika Raj | D14B | Arbitrium | 15/02/2021-02/04/2021 |
| | Shazia Shaikh | D14B | TeleNetworks Technologies Private Limited | 15/02/2021 to 20/02/2021 |
| 34 | Shazia Shaikh | D14B | Sparks Foundation | 03/2021 to 04/2021 |
| 35 | Kritika Pathak | D14B | The Sparks Foundation | 02/2021 to 03/2021 |
| 36 | Anusha Krishnan | D19B | Deloitte | 06/2020 to 07/2020 |
| 37 | Arnab Saha | D14B | TeleNetworks Technologies Private Limited | 09/2020 to 09/2020 |
| 38 | Pankaj Talreja | D14B | Virtually Testing Foundation | 18/01/20121-22/03/2021 |
| | Yash Bhise | D9B | The Sparks Foundation | 02/04/2021 to 1/04/2021 |
| 40 | Yash Bhise | D9B | Nuclei Technologies | 5/1/2020 to 5/02/2021 |
| 41 | Chirag Jain | D9B | Nuclei Technologies | May 2020 |
| | Anuch Ramrakhiani | D14A | TeleNetworks Technologies Pvt. Ltd. | 15/02/2021 - 20/02/2021 |
| 43 | Aayush Moza | D9B | Unlock Digital | 20/06/2020-23/08/2020 |
| 44 | Aditi Patil | D9B | Gustovalley Technovations | 21/02/2021 - 21/03/2021 |
| 45 | Shardul Khot | D14A | Nuclei Technologies | 11/2020 |
| 46 | Mansi Kasar | D14B | Insane AI | 14/09/20 - 21/10/20 |
| 47 | Gaurav Jagwani | D14B | Forage KPMG Virtual Intership | 01/07/2020- 16/07/2020 |



OF



| 48 | Gaurav Jagwani | D14B | The Sparks Foundation | 06/02/2021- 06/03/2021 |
|----|--------------------|------|---|--------------------------|
| 49 | Sameer Nimse | D14B | TeleNetworks Technologies Private Limited | 15/02/2021 to 20/02/2021 |
| 50 | Neha Nishad | D14B | Forage KPMG Virtual Intership | 01/07/2020- 16/07/2020 |
| 51 | Harshala Dalal | D14B | TeleNetworks Technologies Private Limited | 15/02/2021 to 20/02/2021 |
| 52 | Muskaan Bhargava | D14B | GAIL (INDIA) Limited | 05/12/2020 to 15/01/2021 |
| 53 | Neha Nishad | D14B | Muskurahat Foundation | 15/09/2020-16/10/2020 |
| 54 | Neha Nishad | D14B | Microsoft Virtual Intern | 01/09/2020-13/09/2020 |
| 55 | Abhishek Singhal | D14B | TeleNetworks Technologies Private Limited | 15/02/2021 to 20/02/2021 |
| 56 | Aayushi Ved | D14B | TeleNetworks Technologies Private Limited | 15/02/2021 to 20/02/2021 |
| 5 | 7 Shubham J Verma | D14B | TeleNetworks Technologies Private Limited | 15/02/2021 to 20/02/2021 |
| 58 | 8 Nikhil Oza | D19A | Decibels Labs Pvt Ltd | 07/06/2021 to 03/07/2021 |
| 55 | 9 Aman Kadam | D14B | SCINNTC SUPPLY CHAIN SOLUTION | 15/06/2021 to 12/07/2021 |
| 6 | 0 Om Bharwani | D19A | Gustovalley Technovations | 21/06/2021 to 21/07/2021 |
| 6 | 1 Tanvi Soni | D14A | Nuclei Technologies | 05/08/2020 to 05/09/2020 |
| 6 | 2 Mrunal Murudkar | D9A | Smart Consultant Pvt. Ltd. Co. | 15/07/2020 to 31/10/2020 |
| 6 | 3 Nikita Punjabi | D14A | Decibels Labs Pvt. Ltd | 07/06/2021 to 03/07/2021 |
| 6 | 4 Dhanshri Agrawal | D19B | TCR INNOVATION | 12/06/2021-present |
| 6 | 5 Dhanshri Agrawal | D19B | forage- goldman sachs | 22/04/2021 to 23/04/2021 |
| 6 | 6 Dhanshri Agrawal | D19B | forage- accenture | 22/04/2021 to 23/04/2021 |
| 6 | 7 Vedant Parte | D19B | Dalvik apps (DA- WEORG) | 17/06/21 to 7/07/21 |
| 6 | 8 Tejas Thoke | D14A | Decibels Labs Pvt Ltd | 07/06/21 to 3/07/21 |
| 6 | 9 Dhanshri Agrawal | D19B | U&I | 25/11/2020 to 21/04/2021 |
| | 0 Prajna Moorthy | D9A | Decibels Labs Pvt. Ltd | 07/06/2021-03/07/2021 |
| | 1 Tejas Thoke | D14A | Discover Technologies | 12/06/2021-19/07/2021 |
| | 2 Dhanshri Agrawal | D19B | U&I | 01/01/2021 to 28/02/2021 |
| | 3 Dhanshri Agrawal | D19B | IEEE by KJ Somaiya | 21/06/2021 to 26/06/2021 |



Anysadha Jadiya





| 74 | Mayur Shinde | D19B | The Sparks Foundation | 01/05/2021 to 01/06/2021 |
|------|-------------------------|------|--|--------------------------|
| 75 | Paarth Rane | D9A | IEEE by KJ Somaiya | 21/06/21 to 26/06/21 |
| 76 | Aditya R Achar | D19B | NPHSAT Systems Pvt. Ltd. | 23/06/21 to 10/07/21 |
| 77 | Aditya R Achar | D19B | IEEE KJ Somaiya | 21/06/21 to 26/06/21 |
| 78 | Aayushi Ved | D19B | IEEE KJ Somaiya | 21/06/2021 to 26/06/2021 |
| | Mansi Zawar | D19B | Dalvik apps (DA- WEORG) | 17/06/21 to 07/07/21 |
| 80 | Abhishek Singhal | D19B | IEEE KJ Somaiya | 21/06/2021 to 26/06/2021 |
| 81 | | D14A | Chegg India Pvt.Ltd. | 5/10/2020 - Present |
| | Yusuf Kulkarni | D14A | Knowledge Solutions India | 2/5/2020 - 13/6/2020 |
| | Yusuf Kulkarni | D14A | IEEE KJ Somaiya | 21/6/2021 - 26/6/2021 |
| | Dhaval Mahajan | D9A | Decibel Labs Pvt. Ltd | 07/06/2021 - 03/07/2021 |
| | Pendyala Sri Mahalaks | | Verzeo | 1/01/2020-29/02/2020 |
| | 5 Shreya Balasubramania | | Knowledge Solutions India | 2/5/2020 - 13/6/2020 |
| | 7 Aarya Naik | D14A | Knowledge Solutions India | 2/5/2020 - 13/6/2020 |
| 8 | 8 Esha Kadam | D14B | Decibels Lab Pvt Ltd | 07/06/2021 - 03/07/2021 |
| | 9 Prachi Patil | D19A | Cannabie | 11/7/2020 - 12/7/2020 |
| 9 | 0 Prachi Patil | D19A | Infotech for Visually Impaired | 7/9/2020 - 13/1/2021 |
| 9 | 1 Dishika Kishnani | D14A | Microsoft virtual internship | 01/09/2020-13/09/2020 |
| 9 | 2 Dishika Kishnani | D14A | womenite | 10/05/2021-16/06/2021 |
| 9 | 3 Prachi Patil | D19A | MyCaptain | 1/6/2020 - 1/8/2020 |
| 9 | 4 Sristi Kushwaha | D14B | iFortis Corporate | 31/05/2021 - 14/07/2021 |
| | 5 Sristi Kushwaha | D19B | IEEE KJ Somaiya | 21/06/2021 - 26/06/2021 |
| 9 | 6 Advait Kulhada | D9A | Decibels Lab Pvt Ltd | 07/06/2021 - 03/07/2021 |
| 0.02 | 7 Advait Kulhada | D9A | Decibels Lab Pvt Ltd | 19/07/2021-Present |
| | 8 Sahil Salian | D19B | IEEE KJ Somaiya | 21/06/2021 - 26/06/2021 |
| 9 | 9 Gargi Khanvilkar | D9A | 512 Army Base Workshop | 21/06/2021-17/07/2021 |
| | 0 Esa Malik | D19A | The Sparks Foundation | 01/05/2021 - 01/06/2021 |
| 10 | 1 Gautam Govindaraju | D9A | Internshala | 21/06/2020 - 02/08/2020 |
| 10 | 2 Gautam Govindaraju | D9A | NPHSAT Systems Pvt. Ltd. | 23/06/2021 - 10/07/2021 |
| 10 | 3 Mohit Kukreja | D19B | Cisco Essentials virtual internship | 10/03/2021-19/03/2021 |
| 10 | 4 Nikhil Tekchandani | D19A | IEEE KJSIEIT | 21/06/2021-26/06/2021 |



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| 105 | Kartik Tiwari | D19A | Forage-Goldman Sachs Virtual Internship | 01/07/2021-23/07/2021 |
|---|-----------------------|------|---|-------------------------|
| 106 | Dhanashree Chavan | D19B | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| 107 | Nikita Joshi | D19B | IEEE KJSIEIT | 21/06/2021 - 26/06/2021 |
| 108 | Dhairya R . Nagpal | D9B | VESIT Renaissance Cell | 11/05/2020-20/06/2020 |
| 109 | Aniket Ingle | D19B | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| 110 | Purva Saindane | D19A | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| 111 | Purva Saindane | D14A | Knowledge Solutions India | 02/05/2020-13/06/2020 |
| 112 | Sumit Jadhav | D9A | Decibels Lab | 07/06/2021-03/07/2021 |
| 113 | Aryan Gupta | D14B | Decibels Lab | 07/06/2021-03/07/2021 |
| | Manu Siddharth | D14B | Nuclei Technologies | 10/09/2019 |
| | Manu Siddharth | D14B | Unschool | 04/05/2021 |
| | 6 Bhavesh Ramchandani | D19B | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| | 7 Deepesh Shahdadpuri | D19A | Accenture | 24/05/2021 - 30/06/2021 |
| | 8 Mohit Kukreja | D19B | Forage-Deloitte Virtual intership | 21/06/2021 - 23/07/2021 |
| | 9 Omkar Salunkhe | D19A | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| | 0 MohitSingh Adhikari | D19B | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| | 1 Asif Khan | D19B | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| | 2 Pankaj Talreja | D19B | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| | 3 Jaanvi Bhatia | D19B | IEEE KJSIEIT | 21/06/21-26/06/21 |
| | 4 Alhaad Velhal | D14B | Dalvik apps (DA- WEORG) | 17/06/21 to 07/07/21 |
| | 5 Bhavika Methwani | D19B | IEEE KJSIEIT | 21/06/21-26/06/21 |
| | 6 Sameer Nimse | D19B | IEEE KJSIEIT | 21/06/21-26/06/21 |
| | 7 Harshala Dalal | D19B | IEEE KJSIEIT | 21/06/21-26/06/21 |
| | 28 Shubham Verma | D19B | IEEE KJSIEIT | 21/6/21-26/6/21 |
| | 9 Suraj Sahu | D19A | IEEE KJSIEIT | 21/06/21-26/06/21 |
| | 30 Sakshee Rode | D19B | Dalvik apps (DA-WEORG) | 17/06/21 - 07/07/21 |
| | 31 Omkar Kale | D19A | DISCOVER TECHNOLOGY | 15/06/2021-20/07/2021 |
| | 32 Saptarshi Das | D9A | INDIA Redefined | 02/04/2020 |
| | 33 Saptarshi Das | D9A | Coursera Project Network | 24/09/2020 |
| | 34 Sarth Mitragotri | D19A | DISCOVER Technologies | 2/06/2021-17/07/2021 |
| and the second se | 35 Swapnil Taur | D14A | Discover Technologies | 05/06/2021 - 20/07/2021 |
| 1 | 36 Yogesh Sonawane | D19A | Discover Technologies | 09/06/2021 - 20/07/2021 |



Anyredha Jodiya





| 137 | Shikhar Raj | D14A | KSI(Knowledge India Solution) | 05/05/20-13/06/20 |
|-----|-------------------|------|--|-------------------------|
| 138 | Shikhar Raj | D14A | Muskurahat Foundation | 12/11/20-13/12/20 |
| | Manasee Parulekar | D14A | Knowledge Solutions India | 02/05/2020 - 13/06/2020 |
| | Manasee Parulekar | D14A | VERZEO | 01/08/2020 - 01/10/2020 |
| 141 | Manasee Parulekar | D14A | WABI TECH | 02/12/2020 - 27/01/2021 |
| 142 | Manasee Parulekar | D14a | UnI (NGO) | 26/01/2021-28/05/2021 |
| 143 | Varun Vicharay | D14A | Knowledge Solutions | 02/05/2020 - 13/06/2020 |
| 144 | Varun Vicharay | D14A | VERZEO | 01/08/2020 - 01/10/2020 |
| 145 | Varun Vicharay | D14A | The Sparks Foundation | 01/03/2021 - 01/04/2021 |
| 146 | Harshita Kukreja | D14A | Gustovalley Technovations | 31/05/2021 - 30/06/2021 |
| 147 | Harshita Kukreja | D14A | IEEE KJSIEIT | 21/06/2021 - 26/06/2021 |
| 148 | Ayushi Pamnani | D14A | Gustovalley Technovations | 31/05/2021 - 30/06/2021 |
| 149 | Ayushi Pamnani | D14A | IEEE KJSIEIT | 21/06/2021-26/06/2021 |
| 150 | Omkar Bodake | D14A | Pantech Solutions | 01/05/2021 - 30/05/2021 |
| 151 | Omkar Bodake | D14A | The Sparks Foundation | 01/05/2021 - 1/06/2021 |
| 152 | Omkar Bodake | D19A | IEEE KJSIEIT | 21/06/2021 - 26/06/2021 |
| 153 | Omkar Bodake | D14A | N.K.Orchid College Of Engineering And Technology | 08/06/2020 - 12/06/2020 |
| 154 | Kumar Bajaj | D14A | N.K.Orchid College Of | 08/06/2020 - 12/06/202 |
| 155 | Kumar Bajaj | D14A | The Sparks Foundation | 01/04/2021- 01/05/2021 |
| 156 | Kumar Bajaj | D14A | Pantech Solutions | 01/05/2021 - 30/05/202 |
| 157 | Kumar Bajaj | D19A | IEEE KJSIEIT | 21/06/2021 - 26/06/202 |
| 158 | Sagar Pujari | D14B | IEEE KJ Somaiya | 21/06/2021 - 26/06/2021 |
| 159 | Vaishnavi Shetty | D14B | Gustovalley Technovations | 21/02/2021 - 21/03/2021 |
| 160 | Pratham Angre | D14B | IEEE KJSIEIT | 21/06/21-26/06/21 |
| 161 | Sakshi Singh | D14B | Startuptime | 10/01/21-28/03/21 |
| 162 | Shardul Khot | D19A | Nuclei Technologies | 12/15/2020 to 1/15/2021 |
| 163 | Adarsh PS | D14B | NPHSAT Systems Pvt. Ltd. | 23/06/2021 - 10/07/2021 |
| 164 | akshay jain | D14B | DECIBELS | 7/06/2021 - 03/07/2021 |
| 165 | akshay jain | D9B | TIMES OF INDIA | 26/07/2020- 15/09/2020 |
| 166 | Aaron Arimpur | D14B | Decibels | 7/06/2021 - 3/07/2021 |
| 167 | Mevean Soans | D14A | Team Everest (NGO) | 23/06/2021 - 07/07/2021 |



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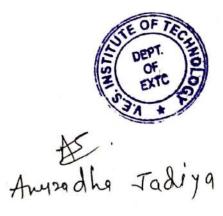




| 168 Janhavi Gogawale | D19B | IEEE KJSIEIT | 21/60/21 - 26/06/21 |
|----------------------|------|--------------|---------------------|
| 169 Janhavi Gogawale | D19B | SHAPEAI | 15/06/21 - 21/06/21 |
| 170 Shazia Shaikh | D19B | ECS Academy | 10/06/21-10/07/21 |



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<u>A 2-Sample List of Student Field Projects</u> <u>2020-21</u>



| Electron | ics & Telecommuni | cation Field Pro | jects 2020-21 | - |
|-----------|-----------------------------------|------------------|--|-----------------|
| Group No. | Name of the Student | Mentor Name | Title of the Project | No. of Students |
| | | | | |
| A1 | Yash Aswani | Mrs Shoba K | PRODUCT | |
| | Chirag Bhardwaj | | TRACKING SYSTEM | |
| | Siddhant Kasley | | | |
| | C.V Ananya | | | 4 |
| | | | | |
| A2 | Om Bhatia | Dr C D Rawat | Detection Of Face Mask Using Image | |
| | Chinmay Chikhalkan | | Processing and | |
| | Nikesh Suthar | | Deep Learning(| |
| | Chirag Varma | | | 4 |
| A3 | Vaibhavsingh Rajput | Mrs Manisha C | Smart Sanitation | |
| AS | Mitali Jadhaw | mi s manisha c | System | |
| | Devesh Sawant | | | |
| <u>a</u> | Atharva Gupte | | | 4 |
| | Adiarva Gupte | | | |
| A4 | Yash Desai | Dr Saylee G. | Provisioning of | |
| | Bhakti Parab | | Reliable Deployment of WSN motes | |
| ÷ | Akshata More (D14B) | | | |
| | Saharsh Mindewar | | | 4 . |
| A5 | Vaibbay Bangla | Dr Nandini A | COVID-19 | |
| AS | Vaibhav Bengle Tanmay Lotankar | | Disinfection Robot Using UVC Light | |
| | Aditya Panigrahi | | | |
| | Saad Shaikh | | | 4 |
| | Saad Shaikh | | | -4 |
| A6 | Dipali Phatak | Mrs Monali C | CARDIAC ARRHYTHMIA DETECTION USING | |
| | Dhanashri Deokar | | | |
| | Anisha Patnaik | | DEEP LEARNING | |
| | Dilip Hingorani | | | 4 |
| | | | | |
| A7 | Meghana Athanikar | Mrs Manisha J | COVID 19 BASED | |
| | Vaishnavi Daber | | AUTOMATED | |
| | Tejas Doke | | SYSTEM | |
| | Apoorva Sudheesh | | | 4 |
| | | | | |
| A8 | Ankita Singh | Mrs Rasika Nalk | Comparison of | |
| | Siddhant Pariani | | different encryption algorithm and proposing new | |
| | Namrata Satpute | | | |







| | Anand Lathi | | algorithm | 4 |
|-----------------|--|---------------------|--|-----|
| A9 | Anish Talwelkar | | SMEnet (An | |
| ~ | Phalguni Shendye | | analytics driven platform to connect | |
| | Saummya Kulkarni (D14B) | 1 6 | small businesses together) | |
| | Pranav Bindra (D14B) | | | 4 |
| A10 | Rushabh Mehrotra | Mr. Chintan Jethva | Auto target moving | |
| | Atharva Ambre | 1 | object with spy BOT | |
| | Ashwin Selvarangan | | | 2.2 |
| | Sumeet Thakur | | | 4 |
| | | u. I u Deuther | Sentiment Analysis | |
| No (1) Is | Rajesh Koku | Ms. Jyoti Dawkhar | on Crimes and | |
| | Neelam Chaurasiya (D14B) | | Covid-19on Social Application Using python/ML | |
| | Isha Bhonge (D14B) | | | |
| | Tanisha Bhola (D14B) | | | 4 |
| A12 | Suyash Bhor | Mr Gaurav Tawde | Skin Cancer | |
| | Muskan Chelwani | | Detection using Image Processing and Convolutional Neural Networks | |
| | Snehith Sachin | | | |
| | Aditya Prabhu | | Active Ac | 4 |
| | | Mrs. Ashwini | Multimodal | |
| A13 | Aashirwad Bedekar Harshali Bhalerao | Sawant | Imaging of Cancer | |
| | Sharvari Gaitonde | - | Detection | |
| | Parth Tripathi | - | | 4 |
| | Parta Inpath | - | | |
| A14 | Pradyuman Giri | Mr. Ajinkya Valanje | Deep Learning | |
| | Aishwarya Poojary (D14B) | | Deep Learning | |
| | Prithvi Sharma | | | |
| | Samarth Shahu | | | 4 |
| | | | A durant Date | |
| A15 | Sakshi Kulkarni | | of Advanced Data Analytics for WSNs | |
| | Rujuta Kherdekar | | UTEO | |







5

Vivekanand Education Society's Institute of Technology

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| | Sakshi Gawande | | | |
|-----|------------------------------|----------------------|---|---|
| | Ritwik Parwani | | | 4 |
| 116 | Tubl Almoni | Prof. Ranjan Bala Ja | MALWARE | |
| A16 | Juhi Ajwani | rior, Kanjan bala J | DETECTION USING | |
| | Abhishek Badhe | - | MACHINE | |
| | Jyeshtha Prabhu | - | LEARING | 4 |
| | Atharva Narkhede | | | 4 |
| A17 | Deeksha Patkar | Mrs. Himali Patel | Real-Time Public | |
| | Kautuki Nirgun | 1 | Transport Information System | |
| | Shreya Chauhan | 7 1" | | |
| | Avikshit Dabholkar (D14B) |] | | 4 |
| A18 | Shraddha shinde | Ms. Neeta Chavan | Anti-Drowning | |
| | Kabir Lulla | | System | |
| | Kshitija Kadam (D14B) | | | |
| | Shreya Swanne (D14B) | | | 4 |
| A19 | Gauray Shukla | Dr. Nadir Charniya | GPS based Bus | |
| | Ashutosh Pandey (D14B) | | Tracking System with the add-on feature of Social Distancing | |
| | Harshal Pawar (D14B) | | | |
| | Mohsin Naik (D14B) | | | 4 |
| A20 | Chrough Chales | Anuradha Jadiya | LIBRARY | |
| A20 | Shreyash Shelar | | AUTOMATION | |
| | Ashwini Yadav | - | AND READING | |
| | Suraj nanwani | 4 | CHECKER | |
| | Jaskaran Singh Khalsa | | | 4 |
| A21 | Rushab Banwat | Pallavi Gangurde | Courier safety in | |
| | Ritesh Hariani | | COVID | |
| | | | | 2 |
| | | | | |
| B1 | Sakshi Modi | Dr Nadir | Social Distancing | |



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13



| | Bhairavi | Charniya | and Disinfectant System for Public | |
|-----------|-----------------------|---------------|---------------------------------------|---|
| | Sawantdesai | | Areas | |
| | Abhishek Birajdar | | | |
| | Anusha Krishnan | | | 4 |
| B2 | Kunal Khaladkar | Mrs Shoba K | BRAILLE TO | |
| | Fiza Khan | 1 | TEXT FOR | |
| | Mansi Bhosale | 1 | BLIND PEOPLE | |
| A | Amarnath Jaiswar | | | 4 |
| B3 | Anjali Patil | Mrs Manisha C | Modeling of Optic | |
| | Dhananjay Teli | | Fibre based | |
| | Saujanya Waikar | | Immunosensor | |
| | Aniket Patil | | | 4 |
| B4 | Pratik Manurkar | Dr C D Rawat | Human Gaze | |
| | Varad Mapuskar | 1 | Controlled | |
| | Mrunal Panari | 1 | Keyboard | |
| | Rochana Desai | | | 4 |
| B5 | Rashmita Bangera | Mrs Monali C | Autonomous | |
| | Madhura Karadkar | - | Ozone Disinfectant with Telemetry | |
| | Vaibhavi Choudhary | 1 | | |
| | Mridul Mohan | 1 | | 4 |
| | The Court | Mrs Rasika N | Design and | |
| B6 | Tejas Gosavi | MITS Rasika N | implementation of | |
| | Amar Pal | | Pseudo Random Number Generator | |
| | Vineet Rathish | - | Number Generator | |
| | Chirag Kataria | | | 4 |
| B7 | Archit Badhe | Mr Shobhit K | Lane and Over | |
| | Rutuja Rakvi | | speed detection | |
| | Rahul Belani | | using IoT to avoid accidents | |
| | Sahaj Santani | | licentents | 4 |
| B8 | Suruchi Singh | Mr. Chintan | Social Distancing | |
| | Sonu Tejwani | Jethva | & Sanitation | |
| | Arya Kasulla | 1 | during COVID - | |
| | Yajnesh Shetty | 1 | 19 | 4 |







| B9 | Shruti Bondre | Mrs Jyoti B | Signboard Reader | |
|------------|----------------------------------|----------------------|---|---|
| | Anuja Moorkundam | | | |
| | Stuti Karn | | | |
| | Aman More | 1 | | 4 |
| | | | | |
| B10 | Lewin Noronha | Mr A | Reverse Vending | |
| | Prasad Naik | NAGANANDA | Machine | |
| | Asawari Tayade |] | | |
| | Arjun Sharma | | | 4 |
| | | | | |
| B11 | Amit Bangani | Dr. R. B. Jain | Speech Emotion | |
| | Akash Pandey | | Recognition using Machine Learning | |
| | Omkar Parte | | Machine Learning | |
| | Raj Dadlani | | | 4 |
| B12 | Sudhanshu Thakur | Dr. R. K. | NUTRIN | |
| BIZ | Bhakti Patil | Kulkarni | NEW GENERATION | |
| | Hiten Makhija | | ELECTRONIC HOT BOX | |
| | Pradeep Thorat | | | 4 |
| | rradeep rnorat | | | 4 |
| B13 | Devendra Singh | Mr. Sanjay M. | Emotion Recognition for Speech using MFCC | |
| | Labana | | | |
| | Adith Nair | | | |
| | Nikhil Punjabi | | | |
| | Samarth Sewlani | | | 4 |
| D14 | We day Coloral | No. No. | DIONICIAND | |
| B14 | Karina Sakpal Sheetal Chavare | Mrs Nusrat Ansari | BIONIC LIMB | |
| | Taral Karan(D14C) | | | |
| | Ramchandra | 1 | | |
| | Wadkar(D14C) | | | 4 |
| | | | | |
| B15 | Vaidehi Mane | Mrs Arti Sawant | A Video Based | |
| | Akshaya Kadam | | Fire Detection Using Deep Learning Models | |
| | (D14C) Mamta Pathare | { | | _ |
| | (D14C) | | | |
| | Tanvi Shelar(D14C) | 1 | | 4 |
| | | | | |







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| B16 | Ankita mandal (D14B) | Mr. Mrugendra V. | BLIND PERSON' S ASSISTANT | |
|-----|------------------------------------|---------------------|---|---|
| | Aishwarya patange (D14B) | | | |
| | Chaitanya moregaonkar (D14B) | | | |
| | |] | | 4 |
| CI | Ganesh Gaonkar | Sanjay M | Design and Performance Analysis of Rectangular and Circular Microstrip patch Antenna for | |
| | Prathmesh Indalkar | | GPS Applications | |
| | Omkar Jambhale | 1 | | |
| | Nikhil Wagh | | | 4 |
| C2 | T | De Caulta C | | |
| C2 | Juveriya Khan | Dr Saylee G | Fake news detector | |
| | Riddhi Sakpal | - | 1 | |
| | Dipti Ramane | - | | |
| | Poonam Masaye | | | 4 |
| C3 | Srushti Ragade | Dr R K Kulkarni | Bridge Health Monitoring System | |
| | Ashish Ahire | | | |
| | Swapnil Patil | | | |
| | Urmila Shinde | | | 4 |
| C4 | Labhesh Patil | Mr Gaurav T | Brain controlled wheel chair | |
| | Pranay Pagare | ÷ * | | |
| | Aakash Panchal | | | |
| | Harikrishnan | | | |
| | Suresh | | | 4 |
| C5 | Vinay Bhati | Mrs Nusrat A | SMART | |
| | Shubham Panchal | | SEGREGATOR | |
| | Akshata Wagh | | USING IOT AND | |



B



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| | Silpa Sankaranarayanan | | | |
|-----|---------------------------|---------------|---|---|
| | | | | 4 |
| C6 | Mitali Joshi | Mrs Manisha J | Shoes disinfector | |
| | Kanchan Mandal | - | | |
| | Deepak Kolekar | - | | |
| | Harshal Sawant | 1 | | 4 |
| | | | | |
| C7 | Shriya Chavan | Mrs Neeta C | Smart car system | |
| | Neerav Thakur | | | |
| | Meet Sangoi |] | | |
| | Mayuresh Pandit | | | 4 |
| C8 | Abhishek Desale | Mrs Himali P | IOT based SWIFT TERMINATOR SHIELD | |
| | Deepak Mishra | - | 1 1 | |
| | Priyanka Salap | 1 | | |
| | Siddhika Thakur | | | 3 |
| C9 | Srushti Barve | Mrs Arti S | Chat-Boat for | |
| 0, | Supriya Gaikwad | | college management | |
| | Dinesh Nimbane | - | system using A.I | |
| | Sonali pawar | 1 | | 4 |
| | Sonan pamar | | | 4 |
| C10 | Sumati chavan | Mrs Ashwini S | Covid Frontline Assistant Robo | |
| | Nalini darekar | | | |
| | Manali Kathale | | | |
| | Shubham raut |] | | 4 |



CA





| C11 | Devendra Bhavsar | Dr Nandini A | AUTOMATIC | |
|-----|------------------|----------------|---|---|
| | Gaurav Dawre |] | DISTRIBUTION | |
| | Nikhil Gunjal | | SYSTEM BASED ON GSM | |
| | Kishor Hotkar | | Gam | 4 |
| C12 | Izhar Ahmad | Mrs Anuradha J | VIRTUAL PCB | |
| | Ayatullah Ansari |] | PRINTING | |
| | Naved Momin |] | MACHINE | |
| | Vivekkumar Konda | | | 4 |
| C13 | Siddhant Satam | Mr Mrugendra V | ALL TERRAIN DRONE | |
| | Sai Rane | | | |
| | Sagar Khurana | | | |
| | Shubham Singh | | | 4 |
| C16 | Sakshi Yendhe | Mrs Pallavi G | IOT Based Contactless Vending Machine | |
| | Samadhan Gund |] | | |
| | Kajal Sharma | | | 3 |



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



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

| | Electronics & Telecomm | unication Mini Proj | ects 2020-21 | -, |
|-----------------|-------------------------|---------------------|-------------------|----------------|
| Group Number | Name of the students | Name of the mentor | Title of Project | No, of Student |
| | Mohit Sajeevan | | Automatic room | 4 |
| | Nishant Pathare | | lights | |
| | Dhruv Wankhede | | | |
| Group1 | Divyanshu Pandey | Mr.Chintan Jethwa | | |
| | Kartik Mahadev Avhad | | Vehicle parking | 4 |
| | Dhaval Unmesh Mahaja | | counter | |
| | Sumit Tukaram Jadhav | | | 0.5 |
| Group2 | Rahul Vijay Jeswani | Mrs.Himali Patel | | |
| | Ishan Mahesh Kharat | | Automatic Vehicle | 4 |
| | Rishabh Ramanugrah Ti | 1 | Speed Control | |
| | Atharva Sandeep Kulkar | Mr.Shobhit | System | |
| Group3 | Yashraj Nandkumar Kad | | | |
| | Niraj Sanjiv Wadile | | Wireless Mobile | 4 |
| | Sanket Nagnath Deshmu | | Charger | |
| | Jitesh Vivek Shamdasani | × | | |
| Group4 | Mobaashir Hussain Mosl | Mrs. Jyoti D | | |
| | Rahul Yogeshwar Kulkar | 4 | Touch free soap | 4 |
| | Hrushikesh Sandeep Sat | - | dispensers | r i |
| | Sudhanshu Deepak Thor | | | |
| Group5 | Saumya Harishankar Tiv | Mrs.Rasika Naik | | |
| | Trisha Tukesh Gaur | | Automated Tap | 4 |
| | Sharvani Vidyadhar Saw | 7 | Control System | |
| | Mevean Cavin Soans | 1 | | |
| Group6 | Shubham Bhavesh Sanga | Mr.V.Mrugendra | | |
| | Gautam Govindaraju | | Noise detector | 4 |
| | Arjun Satheesh | - | | |
| | Priyanshu Bhagat | 1 | | |
| Group7 | Prajakta Gurav | Mr.Ajinkya V | | |
| | Aayushi Mishra | 1 | Robo cleaner | 4 |
| | Anushka Milind Kulkari | - | | |



Bulling





| | Sudipa Majumdar | | | |
|---------|------------------------|-----------------|-------------------------|---|
| Group8 | Devesh Ramesh | Mr.Gauray T | | |
| | | | | |
| | Gargi Nandkumar Khan | | Portable Mobile | 4 |
| | Gunjan Sureka | | Charger | |
| | Akshata Despande | | | |
| Group9 | Shreya Dhamne | Mrs.Manisha J | | |
| | ROHAN CHETAN BHA | | Smart Dustbin | 4 |
| | VIGNESH JAGDISH PO | | | |
| | PAARTH PRAMOD RAT | | | |
| Group10 | NIRANJAN ABHIJIT VA | Mrs.Pallavi G | | |
| | Priyanka Subramaniyam | | Audio Transfer using | 4 |
| | Mubashshir Shikalgar | | Li-fi Technology | |
| | Anupama Ravindran | | 1512 | |
| Group11 | Harshal Gotarne | Mrs.Nusrat A | | |
| | | | | |
| | Kopal kotecha | | ELECTRONIC | 4 |
| | Advait Kulhada | | DOOR LOCK | |
| | Saptarshi Das | | | |
| Group12 | V. Anuparvathi | Mrs.Anuradha J | | |
| | Prajna Moorthy | | Smart Lock System | 4 |
| | Mrunal murudkar | | Smart Lock System | 4 |
| | Vasudha Sasikumar | | | |
| C11 | | Mrs.Arti Sawant | | |
| Group13 | Varun Arya | MISARI Sawant | | |
| | Isha Sudhir Chavan | | Fire alarm | 4 |
| | Neha Raji Makattil | | | |
| | Austin Prabhakar Mathe | | | |
| Group14 | Saakshi Tejpal Karkera | Mrs.Neeta C | | |
| | Tanya Dubey | | Obstacle Avoiding | 4 |
| | Yash Bhise | | Robot | |
| | Ishu Dubey | | | |
| Group15 | Vaishnavi Shetty | Mrs.Jyoti D | · · · · · · · | |
| | AMEYA ANAND DIKSH | | Touchless Doorbell | 4 |
| | ABHISHEK SUNIL BHA | | is a cline as boot well | |



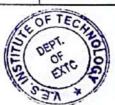




| | SAKSHI SINGH | | | |
|---------|---|-----------------------|-----------------------------|-------|
| Group16 | PRATHAM YASHWANT | Mrs.Anuradha J | | |
| | Vinger Vigerather Not | | | 4 |
| | Vinaya Viswanathan Nai Shripad Vinayak Kulkari | | SOLAR MOBILE CHARGER | 4 |
| | | ripad vinayak Kuikari | | |
| Group17 | Yukta Mohanrao Talagar | Mrs.Manisha J | | |
| Groupi | Girish Gopalakrishnan | WITS.Manisha J | | |
| | Karan Manish Gada | | Assistant Car | 4 |
| | Aditya ankush jagadale | | Control | |
| | Chunay milind Chaudha | | | |
| Group18 | Paritosh vinayak borkar | MR.Mrugendra V | | |
| | | | | |
| | Shrutika Saket Patel | | Car Parking Guard System | 4 |
| | Aditi Kishor Patil | | o, stem | |
| | Nidhi Roshan Mundhada | | | |
| Group19 | Maaroof Sajid Merchant | Mrs.Nusrat A | | |
| | Srushti Mahendra Jagtar | | TV REMOTE | 3 |
| | Chirag Shantilal Jain | | JAMMER | |
| | Aryan Rajesh Gupta | | | |
| Group20 | | Mr.Chintan J | | |
| | Mikis Anant Panio | | Water Level | 4 |
| | Mihir Anant Ranje Prasiddhi Pravin Tembul | | Detection using | - |
| | Nafees Akhter | | IC555 | |
| Crown21 | Akanksha Dilip Gawade | Mrs.Arti sawant | | |
| Group21 | Akanksha Dhip Gawade | Mit s.Alt i sa want | | |
| | Raj Vithoba Jadhav | | Clap Switch | 4 |
| | Nikhil Bharat kumar jair | | | ~ |
| | Aaron Arimpur Varghees | | | |
| Group22 | Gargi Vinod Gaikwad | MrsNeeta C | | |
| đ | - No. 4 | | Clap Switch | 4 |
| | Khan Md. Ayan | | Capowica | |
| | Krishik Suresh Rao | | | |
| / | Abhinav Anil Dawale | Mrs.Himali Patel | | |
| Group23 | Manas Mahendra Singh | Mrs.minan Pater | | |
| l. | Esha Pradeep Kadam | | Modular Burglar | 4 |
| | | | 1 | OFTEC |









| | Manu Anil Siddharth | | Alarm | |
|---------------------------------------|---|-----------------|------------------------------|-------|
| | Ameya Amol Padwad | | | |
| Group24 | Risa Ranjan Samanta | Mrs.Pallavi G | | |
| Groupzy | Kisa Kanjan Samanta | ana.r anarr G | | |
| 1 | Rohan Giri | | OBSTACLE | 4 |
| | Adarsh | | SENSING BOT | |
| | Sakshi gupta | | | |
| Group25 | Heeral | Mr.Sanjay M | | |
| citempier | | | | |
| | Ahona Dyutiman Chatto | | Pressure sensitive | 4 |
| | Mukul Amit Desai | | Alarm Clock | |
| | Pritish Sandcep Bansal | | | |
| Group26 | Yash Ashok Patil | Mr.Gaurav T | | |
| | - L | | | |
| | Yogesh Shamsundar Inan | | Plant Irrigation | 4 |
| | Akshay Mahaveer Jain | | sytem | |
| | Bhavesh Girdhar Singh F | | | |
| Group27 | Raj Bhagwant Yeola | Mr.Shobhit K | | 1 |
| | | | | |
| | Janhavi Yatin Bhutki | | SOS: Sound of Stress | 4 |
| | Sagar Sunil Pujari | | | |
| | Hridesh Hari Singh Kam | | | |
| Group28 | Varijaksh Varadraj Katti | Mr.Ajinkya V | | |
| | | | | |
| | Rushikesh Sambhaji Pale | | DTMF Remote | 4 |
| | Chelsi S Prakash | | Appliance | |
| | Aayush Moza | | | |
| Group29 | Avantika Prasanna Shett | Mrs.Ashwini S | | |
| · · · · · · · · · · · · · · · · · · · | | _ | | |
| | HIMANSHU PRASAD (| | AUTOMATIC CAR WIPER USING | 4 |
| | Shravan Shivanand Shan | | RAIN SENSOR | |
| | SAHIL SHRIVARDHAN | | | |
| Group30 | Sanjeev Tewari (D9A) | Mrs.MonaliC | | |
| | should black at (DOD) | | Metal Detector | 4 |
| | shweta bhabal (D9B) | | Circuit | |
| | aditya singh (D9B) Abhishek Ajit Bhingarde | | 100,850 B(\$903) | |
| 0 | Rohit Narendra dahad (I | Mrs.Nandini A | | |
| Group31 | Ronit Narendra danad (4 | Mi sa vanonin A | | |
| | Prathmesh Jadhav(D9A) | | | 5 |
| | SOCIETY'S ASS | (Doubles | | DEPT. |
| | (1) (MUMBAI-400 074) | | INS | OF S |







| Group34 | Mahesh Raut(D9B) | MR.Mrugendra V | Monitoring | |
|---------|------------------------|----------------|-----------------|---|
| | Shreya Kate(D9B) | | Pollution | |
| | Farheen Khan(d9B) | | | |
| | Riddhi Joshi (D9B) | | | 4 |
| Group33 | Shubham Survey(D9A) | MR.Mrugendra V | Telefarming | |
| | Aishwarya Birambole(d9 | | | |
| | Omkar Sakpal (D9B) | | | |
| | Swapnil Shetye (D9A) | | | |
| | Shreyas Patil (d9B) | | | 5 |
| Group32 | Arunkumar (D9B) | MR.Mrugendra V | Home Automation | |
| | Akanksha Jadhav(D9A) | | | |
| | Athary Phadalc9D9A) | | | |
| | Trupti Sonawane(D9A) | | | |









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| Group No. | Name of Students | Mentor Name | Title of Project | No. of students |
|-----------|---------------------|----------------|------------------|-----------------|
| | Vandesh Sawant | Manisha Tiwary | | |
| I | Siddhi Kadam | | | 5 |
| | Maitreya Kadam | | | |
| Group 1 | Aditi Chakraborty | | | |
| D4A | Aryan Chaudhary | | Lifi Technology | |
| | Abhinav Verma | Manisha Tiwary | | |
| 1 | Aditya Mishra | | | 5 |
| | Pratik Upadhye | | Solar Cell | |
| | Atharv Gaonkar | | | |
| Group 2 | Mitlesh Shinde | | | |
| | | | | |
| | Varun Bangad | Manisha Tiwary | Diffraction | |
| | Aditya Sharma | | Grating | 4 |
| | Harsh Shrivastav | | | |
| Group 3 | Aditya Kushwaha | | | |
| | Tadbhav Anchan | Manisha Tiwary | | |
| 1 | Ashutosh Deorukhkar | | | 4 |
| | Tejas Khedkar | | Portable Mobile | |
| Group 4 | Sujay Manchekar | | Charger | |
| | Gaurang Kedare | | | |
| I | Sarthak Adhangale | Manisha Tiwary | | 5 |

First year Mini Projects 20-21

Group 5



| | Mansi Pawar | | Rain detector | |
|---------|----------------------|----------------|-------------------|---|
| | Omkar Mourya | | | |
| | Ishan Jain | | | |
| | | | | |
| | Harsh Ranjan | Manisha Tiwary | | |
| | Pooja Narayanan | | | 5 |
| | Chaitali Kulkarni | | | |
| | Avantika Narvekar | | | |
| Group 6 | Anushka Sunil Darure | | Electronic Eye | |
| | | | | |
| | Anushka Desai | | | |
| | Madhura Ghanwat | Manisha Tiwary | | |
| | Srushti Pagar | | | 5 |
| | Diti Patil | | Single Axis Solar | |
| Group 7 | Vaibhav Singh | | Tracker | |
| | | | | |
| | Atharva Joshi | Manisha Tiwary | | |
| • | Soumya Chauhan | | | |
| | Vaishnavi Amritwar | | Laser Security | |
| | Anishka Bajpai | | | 5 |
| Group 8 | Atharva Kale | | | |
| | | | | |
| | Aadarsh Pandit | | | |
| | Aniket Sangle | Manisha Tiwary | | |
| | Hrishikesh Kulkarni | | Structure Of Atom | |
| | Aditya Naresh | | | 5 |
| Group 9 | Yash Chavan | | | |
| | | | | |
| | Harsh Mohile | | | |



| | Kshitij Nag | Manisha Tiwary | | |
|----------|--------------------|----------------|-------------------------|----|
| | Prathamesh Pradhan | | | 5 |
| | Milind Sawant | | | |
| | Pratham Shetty | | Piezoelectric generator | |
| | | | | |
| | Udit Koli | Manisha Tiwary | | |
| | Varad Deshpande | | | 5 |
| | Aditya Rao | | | |
| | Aniket Sune | | Heisenberg's | |
| Group 11 | Kuldeep Singh | | uncertainty principle | |
| | Atharva Hedaoo | Manisha Tiwary | | |
| | Vrundali Patil | | | 5 |
| | Dhruv Gohel | | | |
| | Priyal Singh | | | |
| Group 12 | Tanmay Gupte | | Automatic Night Lamp | |
| | | | | 58 |

| Group 1 D4B | Aayushi Santosh Rajeshirke | Dr. Jessy P. J | Brake failure Indicator | |
|----------------|--|----------------|-------------------------|---|
| | Dsouza Alrich Xavier Paul Prasad Madhukar Kokate Prachi Pramod Thombare | | | 4 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



| Group 2 | AVANTIKA KRISHAN AGRAWAL | Dr. Jessy P. J | | |
|---------|------------------------------|------------------|---|---|
| | SAKSHI SUNIL MANJREKAR | | 5 | |
| | SAKSHI SANJAYKUMAR PATIL | | SMART DUSTBIN WITH ARDUINO | |
| | SHIVANI VIJAY PRASAD | | | |
| | NIRAJ SACHIN DIVEKAR | | | |
| Group 3 | Rakshak Kumar tapaswi | | | |
| | Nitesh Harishchandra bovi | Dr. Jessy P. J | WATER LEVEL INDICATOR | 5 |
| | Arul thakur |] | | |
| | Harshal raut | | | |
| | Satyam k mishra | | | |
| Group 4 | Rajat Sunil Mhatre | | | |
| | Kaustubh Vijay Pawar | Dr. Jessy P. J | Solar Power Bank | 4 |
| | Ratnakshi Sunil Gore | | | |
| | Abhishek Mokal | | | |
| | | | | |
| Group 5 | Manali Bhave | - Dr. Jessy P. J | Light Energy Generation(Using Wind Turbine) | 4 |
| | Radhika Damle | | | |
| | Manjiri Jadhav | | | |
| | Manpreat Kaur | | | |



| Group 6 | Bhoomi Gupta | Dr. Jessy P. J | | 5 |
|---------|-------------------|----------------|-------------------------|---|
| | Prince Gupta | | | |
| | Pranjal Haldankar | | LiFi Technology | |
| | Shubham Kumar | | | |
| | Shweta Mane | | | |
| | | | | |
| Group 7 | Puja Mahankuda | Dr. Jessy P. J | | |
| | Niyati Deshmukh | | | 4 |
| | Manashree | | Automatic Night Lamp | |
| | Tendulkar | | Using a Transistor | |
| | Pradeesh Reddy | | | |
| | | | | |
| | | | | |
| Group 8 | Hitesh Kapure | Dr. Jessy P. J | LIFI TECHNOLOGY | 3 |
| | Ayush Kotkar | | | |
| | Tushar Jain | | | |
| | | | | |
| | | | | |
| | | | | |
| Group 9 | Arya Hirlekar | Dr. Jessy P. J | EDDY CURRENT BRAKING | |
| | Aman Verma | | | 5 |
| | Shreyas Santosh | | | |
| | Sarang | | | |
| | Pratham Patil | | | |
| | Prathamesh Tamse | | | |
| | | | | |



| Group | | | | |
|-------------|-----------------------------|--------------------------------------|--|---|
| 10 | Yuvraj Harad | | Laser Security System | |
| | Harsh Yadav | | | 5 |
| | Kalpesh Kolambe | Dr. Jessy P. J | | |
| | Varun Dhakne | | | |
| | Siddhesh Gajare | | | |
| Group 11 | Shantanu Nilesh Deshmukh | arat Dr. Jessy P. J Eye strain alarm | Eve strain alarm | |
| | Aditi Navnath Bombe | | | 5 |
| | Varun Tushar Gharat | | | |
| | Amaan Kamaluddin Hamdule | | | |
| | Pratik Pradeep Patkar | | | |
| Group 12 | Yash Shivyogappa Kumbhar | Dr. Jessy P. J | LED Thermometer using LM3914 And LM35 | |
| | Yash Bhor | | | 3 |
| | Vismay Kakhandki | | | |
| | | | | |
| Group | | | | |
| 13 | Tanmayee Bochare | - Dr. Jessy P. J | Replacement of Silicon in Solar Cells - Perovskite | |
| | Soniya Deshmukh | | | 5 |
| | Tejas Lagwankar | | | |
| | Atharva Petkar | | | |
| | Siddesh Shetty | | | |



| Group 14 | | | PROJECTILES | |
|-------------|--------------------|------------------|-------------|----|
| | Sheikh Shahid gull | l Dr. Jessy P. J | | 4 |
| | Mayank desai | PROJECTILES | | |
| | Aditya Mishra | | | |
| | | | | 61 |



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<u>B 1. Sample Internship Completion</u> <u>Certificates</u>



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Deepesh Shahdadpuri Accenture Discovery Program

Certificate of Completion August 13th, 2020

Over the period of August 2020, Deepesh Shahdadpuri has completed practical task modules in:

Set Project Priorities Assemble a plan User journey Redesign Outcomes Analysis Fix the errors Choose your language Prioritisation & Impact Assessment





Tom Brunskill CEO, Co-Founder of InsideSherpa







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Inventrom/HRD/2021/FREESUM14955 15/04/2021

INTERNSHIP COMPLETION CERTIFICATE

To Whom It May Concern

This is to certify that Sumit Jadhav, a student of Vivekanand Education Societie's Institute of Technology has successfully completed a Student Partner Internship at Inventrom Private Limited for the duration of 2 months from 15/02/2021 to 14/04/2021. During this internship, the tasks undertaken by Sumit were related to popularising the concepts of Internet of Things(IoT) and Machine Learning(ML), brand awareness and business development of the Bolt IoT and ML online video training.

We take this opportunity to thank Sumit for his/her contribution during this internship and wish them all the best for their future.

Note for hiring companies: To verify the authenticity of this certificate, please email to <u>hr@boltiot.com</u> with the code - FREESUM14955

Yours sincerely, For Inventrom Private Limited (Bolt IoT)

Joyner Fernandes Human Resources Manager Inventrom Private Limited (Bolt IoT)

#79, First Floor, 5th main road, 11th cross road, Binnamangala, Stage 1, Indiranagar, Bengaluru -560038 Ph: 8881197198 E-mail: contactus@boltiot.com, Website: <u>www.boltiot.com</u>



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we are crazy CRAZY FOR SUCCESS FOUNDATION

TO WHOMSOEVER IT MAY CONCERN

14-02-2021

Certificate no: 206373

This is to certify that Kimaya Kolambe, has successfully completed his/her online internship with CRAZY FOR SUCCESS FOUNDATION during the period 01-02-2021 to 14-02-2021.

During the period, he/she handled the position of HR-Talent Acquisition for the organization.

During the course of internship, Kimaya Kolambe has shown great amount of responsibility, sincerity and a genuine willingness to learn and zeal to take on new assignments & challenges. In particular, his/her coordination skills and communication skills are par excellence and his/her attention to detail is impressive.

We wish him/her all the very best for the future.

With regards,

nowith

Himanshu Singh Vice President

Crazy for Success Foundation

CRAZY FOR SUCCESS FOUNDATION

www.wearecrazy.org

ry.org info@wea

info@wearecrazy.org



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



Benneth, Coleman & Eo. Ltd 2. Bahedurshah Zafar Marg, New Delhi 110003 (J. 91-11, 23302000 Registered Office: The Times of India Building, Dr. D.N. Read, Munical 400001 Corporate Identity No: U22120MH1913PLC0D0391

September 26, 2020

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Tanya Dubey student of Vivekanand education society's institute of technology has successfully completed Internship from July 08, 2020 to August 31, 2020 with Results and Market Development department of "BCCL", Location Mumbai.

The details of the Project are as follows:

Project: Project access.
Name of the Guide: Mr. Parvez Shaikh

During the internship period She was found dedicated, self-motivated and hard working.

Wish her all success in future endeavors.

For Bennett, Coleman & Co. Ltd.

Noticet.

Nachiket Upadhyay Assistant General Manager - Human Resources

The Times of India The Economic Times Mumbai Mirror Bombay Times Speaking Tree Times Now NavBharat Times Nav Gujarat Samay Maharashtra Times Ei Samay Vijay Karnataka Filmfare Femina Hello RadioMirchi ET Now Zoom Romedy Now Movies Now Indiatimes Magicbricks Timesjobs Gaana



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CERTIFICATE OF APPRECIATION

This is presented to

BHUVANA RAISINGHANI

for successfully completing her internship at applex.in as a Graphic Designing intern.

Her contribution has added value to our organisation and we sincerely wish her a bright future.

ownajit bas

SOURAJIT BASU Co founder

Anita a

ANKITA DE Co founder





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VARUN BHAT Engineering Virtual Program

Certificate of Completion November 10th, 2020

Over the period of November 2020, VARUN BHAT has completed practical task modules in: Crack leaked password database

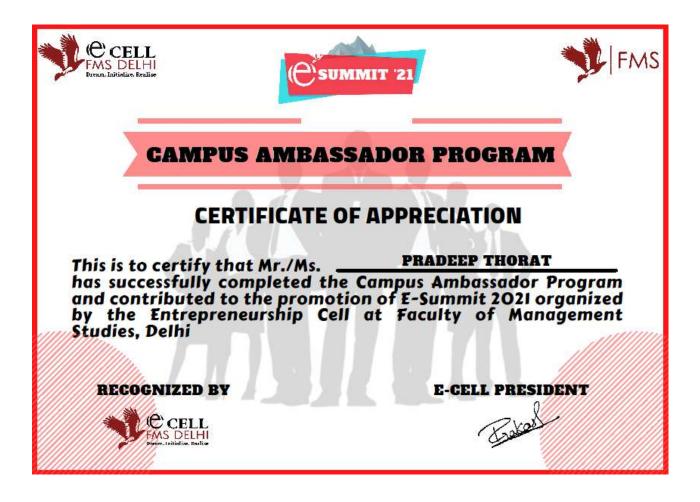


Phil J. Venables Global Chief Information Security Officer Tom Brunskill CEO, Co-Founder of

Forage

Enrolment Verification Code FR7dsgrEKGyezoa8g | User Verification Code b562PwC35QSLoTBS | issued by Forage







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Gaurav Jagwani Data Analytics Consulting Virtual Internship

Certificate of Completion August 16th, 2020

Over the period of August 2020, Gaurav Jagwani has completed practical task modules in:

Data Insights Data Insights and Presentation Data Quality Assessment

Enrolment Verification Code ti78NASjkdaJYaShF | User Verification Code mAph4vmawsWAw7aFQ | Issued by Forage



National Managing Partner People Performance and Culture Tom Brunskill

CEO, Co-Founder of

Forage



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CodeSpeedy Technology Private Limited

Berhampore,West Bengal CIN - U72900WB2019PTC230787



Certificate of Internship This is presented to

ROHIT AMBESH

for contributing source codes/projects/libraries on Coders Packet, an online platform of source code directory for projects. The contribution field is in Python . Your packets are successfully published and your author URL is: https://coderspacket.com/contributor/rohitambesh



From 04/09/2020 to 04/10/2020 (DD/MM/YYYY)



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CERTIFICATE OF COMPLETION

This is to certify that <u>SHUBHAM GUPTA</u> has fulfilled his roles and responsibilities with utmost dedication and hard work as a <u>PR & RESEARCH INTERN</u> at Arbitrium from <u>16/10/2020</u> to <u>30/11/2020</u>. We appreciate his efforts and contribution.

Srishti Grover FOUNDER

Pratham Ahuja CO - FOUNDER



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Deloitte.



GANESH GAONKAR Technology Consulting Virtual Internship

Certificate of Completion April 22nd, 2021

Over the period of April 2021, GANESH GAONKAR has completed practical task modules in:

Client Discovery Design a Business Case Considerations For Mobilisation Define the project approach Conduct a market scan Further analysis & solution presentation Understanding Cloud Computing Cloud Feasibility Assessment Cloud Readiness Assessment

Danielle O'Leary Senior Consultant National Graduate Talent Acquisition Team Tom Brunskill CEO, Co-Founder of Forage

Enrolment Verification Code ZXcqfVYDEuPYoQrYE | User Verification Code gzEkjQerAZtoW3jfh | Issued by Forage



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Neha Nishad Data Analytics Consulting Virtual Internship

Certificate of Completion August 16th, 2020

Over the period of August 2020, Neha Nishad has completed practical task modules in:

Data Quality Assessment Data Insights Data Insights and Presentation

abs **Deborah Yates**

Deborah Yates National Managing Partner People Performance and Culture

Tom Brunskill CEO, Co-Founder of InsideSherpa

Enrolment Verification Code E89yRqK9W223txzJK | User Verification Code KKtgwGkFo3ML2gEPH | Issued by InsideSherpa



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गेल (इंडिया) लिमिटेड (भारत सरकार का उपक्रम - महारत्न कंपनी) GAIL (India) Limited (Since an wood table bacetaking - Altabata Table Someony) गेल भवन, 'रती' ट. (. 73, रोड न. 03, रोक्टर 15, री बी.डी. बेलापुर, नवी मुंबई-400614, मडाराष्ट्र (भारत), GAL BHWARA PLOTNO. 73 ADAD NO - 03 SECTOR - 5, CED DELAPTIK NAVI MUMBA-400614 Мал-242451TEX (NDLA) ЮТ-/ PHONE - 022 37581251 औररम(FAX - 01125185321 Info@gs) co.n

Date: 24/03/2021

GAIL/MBI/O&M/HR/TRG./2021

TO WHOMSOVER IT MAY CONCERN

This is to certify that Ms. Muskaan Bhargava, student of B.E. vivekanand Education Society, Institute Of Technology, Mumbai University, Mumbai 400074 has undergone winter training from 05/12/2020 to 15/01/2021 in BI5 department at GAIL, Mumbai.

During the period, she has prepared a report on "Encroachment Report Application Development In GAIL."

Her performance & conduct was excellent during the period. I wish success for her future endeavors.

(Shiv Purusharthi) Dy. General Manager (HR)

র্থজীকুন কার্যালয় : টল পরন, ৬ শীকাएলী জাদা ও্রিস্ত নের্হু হিল্লী-१७०६६, ইউিয়া REGD OPACE GAIL BHAWAN 16 BHIKA'II CAMAPLACE NEWDELH - १७.066, INDIA





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JPMORGAN CHASE & CO.



Yash Bhise Software Engineering Virtual Experience

Certificate of Completion February 5th, 2021

Over the period of January 2021 to February 2021, Yash Bhise has completed practical task modules in:

Interface with a stock price data feed Use JPMorgan Chase frameworks and tools Display data visually for traders

Enrolment Verification Code BzeEkLfkNLuG7FsME | User Verification Code ISBFJ8ZDXXXYK8RyWb | Issued by Forage







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Prestige Shantiniketan, ITPL Main Road, Whitefield, Bangalore 560048 Email: business@insane.ai

Internship Certificate

To whomsoever it may concern

This is to certify that Mansi Kasar has successfully completed her Internship (from 14^{th} September $2020 - 21^{th}$ October 2020) at Insane AI.

During the internship, Mansi has worked on creating the low fidelity mockups and high fidelity designs of our app screens. She was also involved in designing the user interfaces that gave shape to our analytics and gamification features.

We wish Mansi all the best for her future endeavours and look forward to working with her in the future.

Warm regards,

Sourabh Agrawal Co-Founder, Insane Al



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Scholiverse Educare Pvt. Ltd.. B-810, Unitech Business Zone, Nirvana Country, South City 2, Gurgaon, India - 122018

Date - 20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that Shubham Gupta, a student of VESIT, was an active member of the Internshala's campus ambassador program - Internshala Student Partner (ISP) 19 during the period of September 2020 to November 2020.

At Internshala, we consider ISPs, our biggest strength when it comes to educating college students across the world about the power of internships and online trainings.

During this period, Shubham promoted Internshala and its products successfully and showed genuine sincerity and willingness to learn while taking on new assignments and challenges.

We wish Shubham good luck for all the future endeavours.

Kind regards,

.....

Sarvesh Agrawal

Founder and CEO - Internshala

Contact at: isp-hiring@internshala.com



















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Certificate of Excellence

This certificate is proudly presented to

Aryan Gupta

for successfully completing the Unschool Community Program on March 3, 2021 as a **Community Influencer** for 4 weeks, an online internship initiative by



Unschool wishes you the best for your future endeavors.

Rahul Varma

Rahul Varma Chief Executive Officer





















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<u>B 2-Sample Field Project Completion</u> <u>Certificates</u>



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



A VIDEO BASED FIRE DETECTION USING DEEP LEARNING

Submitted in partial fulfilment of the requirements

of the Degree of

Bachelors in Engineering

By

| Vaidehi Mane | Class-D19B (65) |
|---------------|-----------------|
| Akshaya Kadam | Class-D19C (22) |
| Mamta Pathare | Class-D19C (36) |
| Tanvi Shelar | Class-D19C (50) |

Supervisor

Mrs. Arti Sawant





Department of Electronics and Telecommunication Vivekanand Education Society's Institute of Technology Mumbai University

2020-2021



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

Certificate

This is to certify that <u>Vaidehi Mane, Akshaya Kadam, Mamta Pathare,</u> <u>Tanvi Shelar</u> have completed the project report on the topic <u>A Video based</u> <u>Fire Detection using Deep Learning</u> satisfactorily in partial fulfilment of the requirements for the Bachelor's Degree of Engineering in Electronics and Telecommunication under the guidance of <u>Mrs. Arti Sawant</u> during the year 2020-2021 as prescribed by University of Mumbai.

> Principal Mrs. Jayalakshmi Nair

aust Guide

Mrs. Arti Sawant

Head of Department Mrs. Shoba Krishnan

Examiner 1

[Mrs. Arti Sawauf]

Mr. Nitin Chawande Examiner 2 [APCOE] Online Exam







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Project Approval for B.E

Project entitled by <u>A Video based fire Detection using Deep Learning</u> by <u>Vaidehi Mane, Akshaya Kadam, Mamta Pathare, Tanvi Shelar</u> is approved for the degree of Bachelor of Engineering.

| | Examiners with |
|---|------------------------|
| | (Basse 1 |
| | Mr. Nithn chawande |
| | Supervisors CONLINE ex |
| - | |
| | |

Date: 20/5/2021

Place: Mumbai.







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<u>B 3-Sample Mini Project Completion</u> <u>Certificates</u>



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

A Report on

Automatic Room Lights

For

Mini Project 1-a (REV- 2019 'C' Scheme) of Second Year, (SE Sem-III)

In

Electronics & Telecommunication Engineering

By

- 1. Mohit Sajeevan
- 2. Divyanshu Pandey
- 3. Nishant Pathare
- 4. Dhruv Wankhede

Under the guidance of

Mr. Chintan Jethva



UNIVERSITY OF MUMBAI Academic Year 2020-21



Department of Electronics and Telecommunication Engineering Vivekanand Education Society's 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 Project Title is a bonafide work of

- 1. Mohit Sajeevan
- 2. Divyanshu Pandey
- 3. Nishant Pathare
- 4. Dhruv Wankhede

submitted to the University of Mumbai in partial fulfillment of the requirement for the award of Mini Project 1-a (REV- 2019 'C' Scheme) of Second Year, (SE Sem-III) in Electronics & Telecommunication Engineering as laid down by University of Mumbai during academic year 2020-21

Examiner/Reviewer-1

Examiner/ Reviewer -2

0 Mr. Chintan Jethva **Head of Department** Principal Guide SOCIETY OF CHEMBUR, DEPT HUMBAI-400 07 OF INDIA FX



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<u>C 1-Sample Communications & Reports</u> <u>–Internships</u>



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<u>C 2-Sample Communications &</u> <u>Reports-Field Project</u>



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



A VIDEO BASED FIRE DETECTION USING DEEP LEARNING

Submitted in partial fulfilment of the requirements of the Degree of

Bachelors in Engineering

By

| Vaidehi Mane | Class-D19B (65) |
|---------------|-----------------|
| Akshaya Kadam | Class-D19C (22) |
| Mamta Pathare | Class-D19C (36) |
| Tanvi Shelar | Class-D19C (50) |

Supervisor Mrs. Arti Sawant







Department of Electronics and Telecommunication Vivekanand Education Society's Institute of Technology Mumbai University

2020-2021



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

Abstract

Fire is an abnormal event which can cause significant damage to lives and property. In this paper, we propose a deep learning-based fire detection method using a video sequence, which imitates the human fire detection process. The proposed method uses the YOLO model (You look only once) to detect the suspected regions of fire and the non-fire regions. The input image is given to the resnet block in which the image is trained. Then it is given to the yolo model in the model the image is divided into cells with SXS grids, then the bounding boxes are applied on the image. Reducing the bounding boxes using the IOU (intersection over union) formula. Then labelling of the image takes place .ie if the object has fire or not. Experiments show that the proposed method can successfully improve the fire detection accuracy compared with the still image-based ,video-based method by reducing both the false detections and the misdetections.







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A VIDEO BASED FIRE DETECTION USING DEEP LEARNING

1.1 Introduction

Smoke, fire and flames are one of the leading hazards affecting everyday life around the world. According to the National Fire Protection Association (NAPA), the United States fire department responded to an estimated 1,319,500 fires during 2017, which resulted in 3,400 civilian fire fatalities, 14,670 civilian fire injuries, and an estimated \$23 billion in direct property loss. In order to reduce such disasters, fire detection without a false alarm at an early stage is crucial. Accordingly, various automatic fire detection technologies are being developed, and are widely used in real life.

In general, two broad categories of technologies can be identified: traditional fire alarm and fire detection by computer vision. Traditional fire alarm technology is based on smoke or heat sensors that require proximity for activation. These sensors need human involvement to confirm a fire in case of alarm. Furthermore, such systems require various equipment to provide information on the size, location, and burning degree of the fire. To overcome these limitations, researchers have been investigating computer vision-based methods combined with various types of supplementary sensors. This category of technologies gives larger surveillance coverage and offers the advantage of less human intervention with a faster response, as a fire can be confirmed without requiring a visit to the fire location, and provides detailed fire information such as location, size, and degree. Despite these advantages, however, some issues remain concerning the system complexity, and false detection according to diverse reasons. Therefore, researchers have invested significant effort to address these issues in terms of computer vision technology.

Early research on computer vision-based fire detection was focused on the color of a fire within the framework of a rule-based system, which is often sensitive to environmental conditions such as illumination and weather. So, further studies added supplementary features to the color of a fire, including area, surface, boundary, and motion of the suspected region, with other types of decision-making algorithms, such as Bayes classifier and multi-expert systems, in order to make a robust decision.

In general, it is not an easy task to explore the static and dynamic characteristics of diverse flame and smoke to be exploited in a vision system, as it requires a large amount of domain knowledge. In the deep learning approach however, these exploration and exploitation processes can be replaced by the training of an appropriate neural network with a sufficient amount of data in order to avoid over fitting. This approach, therefore, becomes convenient once a dataset with many flame and smoke images or video clips has been built.



EOF DEPT. OF



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A VIDEO BASED FIRE DETECTION USING DEEP LEARNING

In the proposed method, the suspected region of fire (SRoF) is detected with its spatial features against non-fire objects by the YOLO model (You Look Only Once). In this the resnet block trains the image, after that the processing of image takes place in the yolo model for detecting the fire, in this paper we have used the coco dataset for detecting the fire. In coco dataset the images have been already predefined for detecting the fire in the image.





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<u>C 3-Sample Reports-Mini Project</u>



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Vivekanand Education Society's Institute of Technology

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A Report on

Automatic Room Lights

For

Mini Project 1-a (REV- 2019 'C' Scheme) of Second Year, (SE Sem-III)

In

Electronics & Telecommunication Engineering

By

- 1. Mohit Sajeevan
- 2. Divyanshu Pandey
- 3. Nishant Pathare
- 4. Dhruv Wankhede

Under the guidance of

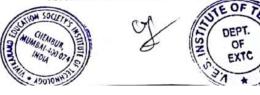
Mr. Chintan Jethva



UNIVERSITY OF MUMBAI Academic Year 2020-21



Department of Electronics and Telecommunication Engineering Vivekanand Education Society's 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 Project Title is a bonafide work of

- 1. Mohit Sajeevan
- 2. Divyanshu Pandey
- 3. Nishant Pathare
- 4. Dhruv Wankhede

submitted to the University of Mumbai in partial fulfillment of the requirement for the award of Mini Project 1-a (REV- 2019 'C' Scheme) of Second Year, (SE Sem-III) in Electronics & Telecommunication Engineering as laid down by University of Mumbai during academic year 2020-21

Examiner/Reviewer-1

Examiner/ Reviewer





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Chapter-1 INTRODUCTION

1.1 NEED

As we are further getting through the 21st Century, the usage of natural resources is exponentially increasing day by day. As a result the limited natural resources are getting depleted. Wastage of electricity is one of the main problems which we are facing nowadays. In our home, school, colleges or industry we see that fan/lights are kept on even if there is nobody in the room or area/passage. This happens due to negligence or because we forgot to turn lights off or when we are in a hurry. To avoid all such situations we have designed this project called "Automatic room lights".

1.2 DEFINITION

The Automatic Room Light circuit is a circuit that senses or detects any movement near it and switches on the light accordingly. If the user is in a certain part of the room, the particular sensor will get triggered and the light nearest to the user will be turned on. The basic principle used here is that of an IR motion detecting circuit.

1.3 Organisation of Report

- <u>Chapter 1</u> : Introduction of our project and use of the project
- <u>Chapter 2</u>: Literature survey of our project. In this chapter we discuss the sources and research done for our project. The research gave us a clear idea about the way to approach and complete the project.
- <u>Chapter 3</u>: This chapter deals with the problem statement of the project.
- <u>Chapter 4</u>: Design and working of the project is discussed in detail. With the help of circuit diagram and block diagram, working of the project is explained.
- <u>Chapter 5</u>: Components and tools used to implement the project have been listed and explained
- <u>Chapter 6</u>: In this chapter we discuss the steps executed for implementation of the project on breadboard.
- Chapter 7 : Troubleshooting done to complete the project successfully.
- <u>Chapter 8</u> : References used



1



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PROBLEM STATEMENT

To design and implement automatic room lights that turn on and off smartly by detecting presence in that particular part of the room. The main objective is to minimise electricity wastage and contribute towards a greener future.

When we enter a room, as a habitual tendency, we often search for a switch to turn the light on, and if we are new to the room, we often find it difficult to locate the switch. Most of the time, many of us forget to switch off the lights while leaving the room in which we stay most of the time. This results in unnecessary power wastage. Therefore, an automatic room-light controller automatically turns on the lights when a person enters a room, and turns off the lights when the person leaves the room. This automatic room controller can be implemented by using a simple microcontroller and wireless IR technologies.

Through this project we tried to minimise the occurrence of any situation leading to wastage of electricity. This project combines sustainability with modernisation to give us an output that would revolutionize the way we use electricity.

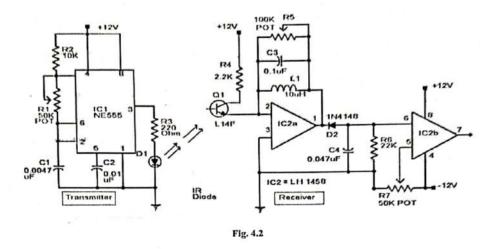


Fig. 3.1



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4.3. CIRCUIT DIAGRAM AND WORKING



As seen in Fig. 4.2, this is the circuit diagram of an infrared motion detector that can be used to sense intrusions. Infrared rays reflected from a static object will be in one phase, and the rays reflected from a moving object will be in another phase. The circuit uses this principle to sense the motion.

The IC1 (NE 555) is wired as an astable multivibrator. The IR diode connected at the output of this IC produces infrared beams of frequency 5Khz. These beams are picked by the infrared sensor, photo transistor Q1. At normal condition, that is, when there is no intrusion the output pin (7) of IC2 will be low. When there is an intrusion the phase of the reflected waveforms has a difference in phase and this phase difference will be picked by the IC2. Now the pin 7 of the IC 2 goes high to indicate the intrusion. An LED is connected at the output of the IC to indicate the intrusion.

In Fig. 4.1 we can see the block diagram for the circuit shown in Fig. 4.2. Here, an optocoupler is used instead of a separate LED and phototransistor(L14F). An optocoupler serves the same purpose as the combination of LED and phototransistor. Also probes have been shown in the block diagram to indicate various characteristics of particular parts of the circuit i.e voltage/current through the cross section. One can see in Fig. 4.3 that the probes



6

