

SCHOLASTIC ACHIEVEMENTS

- Secured **98.72** percentile in Joint Entrance Examination **Advanced** among 240,000 candidates (2019)
- Achieved **99.27** percentile in Joint Entrance Examination **Main** among 11,40,000 candidates (2019)
- Qualified for *Indian National Chemistry Olympiad (INChO)* and secured a rank in the top **300** in *National Standard Examination in Chemistry* among 30,000+ candidates (2019)

KEY PROJECTS

Memorywn Word Game

(Mar'21)

Course Project | Prof V. Rajbabu & Prof S. Vijayakumaran, IIT Bombay

- Coded a program to simulate a word game on the **Atmel AT89C51** Micro-controller with a **LCD Module**
- Programmed the micro-controller in **Embedded C** using **Keil μ Vision** and **Flip** softwares
- Used **UART** Module and **RealTerm** software for interfacing between keyboard and micro-controller

Digital Logic Design in VHDL

(Mar'21)

Course Project | Prof Maryam Baghini, IIT Bombay

- Utilized **Behavioural** modelling to design an **FSM** that plays a musical tone on a Krypton board
- Optimized combinational circuits and programmed their architectures using **structural VHDL**
- Verified designs by performing simulations on all possible inputs using **Scan Chains** on TIVA-C board

Smart Traffic Management System

(Apr'20-Jul'20)

Institute Technical Summer Project | Institute Technical Council, IIT Bombay

- Developed and implemented a virtual **Adaptive Traffic Control Program** which allocates time according to the extent of traffic in each lane of a four-junction to reduce the wastage of time in ongoing traffic system
- Deployed a Radio Frequency Identification (RFID) Alarm System which pauses the program to clear path for emergency vehicles in extreme situations with minimal disturbance to the ongoing traffic
- Analyzed data related to the working of Traffic Signal System and ongoing **Path Clearance Mechanisms** to set up Machine Learning Algorithms to properly allocate the time according to the number of vehicles

Arithmetic Logic Unit (ALU) in VHDL

(Dec'20)

Course Project | Prof Virendra Singh, IIT Bombay

- Designed a **16-bit Kogge Stone Fast Adder** using structural description in VHDL in Quartus Software
- Integrated the adder, subtractor, XOR and NAND operations using a MUX circuit for building an ALU
- Performed simulation using generated testcases in ModelSim-Altera to validate the design

POSITIONS OF RESPONSIBILITY

Business Team Member

(Jun'20-Jul'21)

Autonomous Underwater Vehicle, IIT Bombay

- A core member of a 5-person business subdivision of the team responsible for **Marketing** and publicity of **RoboSub** and NIOT-SAVE through **Media** and **Public Relations** across India
- Remodeled the AUV Website using Web Development tools - **HTML**, **CSS**, **Bootstrap** and **Django templates**, the website ranked **14th** in RoboSub-2020, an annual international level AUV competition
- Ideated with the team and designed a video presentation for the latest Autonomous Underwater Vehicle **Matsya 6** for **RoboSub-2020** which ranked **3rd** among 30+ AUV Teams from around the world

Design Head | BackgroundHum IIT Bombay

(May'21-Present)

Official Newsletter | Department of Electrical Engineering, IIT Bombay

- Part of a team of 25 members responsible for curating content and designing the biannual newsletter of the Electrical department
- Responsible for cumulating write-ups and data from surveys for the articles and deciding the overall design and theme of the newsletter

Hospitality Coordinator | Techfest IIT Bombay

(May'20-Dec'20)

Asia's Largest Science and Technology Festival | 1,75,000+ footfall | 90+ Events

- Heading and supervising **100+ Campus Ambassadors** across India for conducting **WeCare & Heal Social Initiative** a social initiative of Techfest on Animal Welfare
- Working with a team of **50+** people for marketing of various Events and Initiatives of Techfest such as **Enigma** - Online Crypt Hunt, **HOPE** - Mental Health awareness Initiative
- Dealing and negotiating with **10+** International Companies to generate sponsorship for Techfest

Design Coordinator | E-Cell IIT Bombay

(May'20-Mar'21)

Asia's largest Entrepreneurship promoting body having patronage by UNESCO and Startup India

- Coordinating with a team of **10+** members for branding and publicising numerous initiatives of E-Cell
- Led **30%** y-o-y growth in engagement of users by ideating and designing interactive social media posts

TECHNICAL SKILLS

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|------------------------------|---------------------------------------------------------------------------------------------|
| Programming Languages | C++, Python, Julia, Embedded C, Assembly, VHDL |
| Python Libraries | Numpy, OpenCV, Matplotlib |
| Web Development | HTML, CSS, Bootstrap |
| Tools | Git, L ^A T _E X, GNURadio, SolidWorks, AutoCAD, Adobe Illustrato, QGIS |

KEY COURSES

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|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical Engineering | Power Electronics, Analog Circuits, Digital Systems, Signal Processing-I, Probability and Random Processes, Microprocessors, Markov Chains and Queuing Systems, Control Systems, Communication Systems*, Foundation of VLSI CAD* |
| Mathematics and Physics | Calculus, Linear Algebra, Differential Equations, Complex Analysis Quantum Physics and Applications, Basics of Electricity and Magnetism |
| Miscellaneous | Computer Programming and Utilization, Engineering Graphics and Drawing, Biology, Organic and Inorganic Chemistry, Physical Chemistry, Economics |

(*to be completed by Dec'21)

EXTRACURRICULARS

- Designed an **App Controlled Obstacle-Manoeuvring bot** in the **XLR8** competition (2019)
- Worked as a Marketing Coordinator in **Mood Indigo 2020**, Asia's Largest College Cultural Festival (2020)
- Awarded with a **Special Mention** for exemplary volunteering work of 80+ hours for **National Service Scheme(NSS)** under the Department of **Green Campus** (2020)
- Completed Photography project on theme **Quarantimes** under Institute Cultural Council IITB (2020)
- Successfully conducted **Strategy Games** involving entrepreneurial and management skills handling 300+ participants, under **E-Summit 2020** (2020)
- Completed 5 km long Inter Hostel Crossy General Championship representing Hostel 5 (2020)
- Secured **1st** position at the School level for the National Essay Writing Competition by **CBSE** (2017)