



Krishnasya Arush Tadikonda
Electrical Engineering
Indian Institute of Technology, Bombay

190100066
B.Tech.
Gender: Male
DOB: 20-03-2002

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2023	
Intermediate	APBIE	FIITJEE	2019	10
Matriculation	CISCE	Timpany School	2017	97.40%

Pursuing Minor degree in **Computer Science and Engineering**

SCHOLASTIC ACHIEVEMENTS

- Awarded **AA grade** for excellent performance in **EE207(Electronic Devices and Circuits)**, **EE224(Digital Systems)**, **EE229(Signal Processing)**, **EE309(Microprocessors)** and **EE636(Matrix Computations)** 2020
- Obtained **merit-based** change of branch to **B.Tech , Electrical Engineering** (11 out of 1100+ students) 2020
- Awarded **AP grade** in **CH107(Physical Chemistry)** for academic excellence (25 out of 1100+ students) 2019
- Secured an All India Rank of **966** in JEE Advanced out of 0.2 million candidates 2019
- Achieved an All India percentile of **99.82** in JEE Main out of 1.1 million candidates 2019

TECHNICAL EXPERIENCE

Design Engineer (ECU, CAN & DAQ) | IIT Bombay Racing

May 2021 - Present

An active team of **80 students** with the goal of building an **Electric Vehicle** for **Formula Student UK** , a reputed race car design competition organized by Institution of Mechanical Engineers

- Working on implementing **Telemetry Analysis** in our car using wireless data transfer and data processing.
- Developed an interactive **Python** based GUI using **Tkinter** which runs with **MATLAB** in backend to generate real time plots
- Entrusted with the responsibility of **mentoring** Junior Design Engineers of ECU, CAN & DAQ subsystem

Junior Design Engineer (CAN, DAQ & DASH) | IIT Bombay Racing

September 2020 - April 2021

- Tested the working of **Controller Area Network (CAN)** using **Arduino UNO** and **MCP 2551** transceivers.
- Part of a 16-member contingent representing our team in **FSEV** competition by Formula Bharat
- Worked on **Software Integration Report** and **Procurement Report**
- Involved in **selection** and **programming** of DASH display
- Guided **13 trainees** in learning about ECU and CAN subsystems

KEY PROJECTS

Tetris Game

April 2021

Course Project | Prof V. Rajbabu , IIT Bombay

- Programmed the popular game Tetris on the **Atmel AT89C51** Micro-controller with an **LCD Module**.
- Coded the micro-controller in **Embedded C** using **Keil μ Vision** and **Flip softwares**
- Used **UART** Module and **RealTerm** software for interfacing between a keyboard and micro-controller.
- Utilized multiple **Interrupts and Timers** for block movement , **Linear-Shift Feedback Register** for pseudo-random block generation.

QR Decompositon Algorithms for Vandermonde Matrices

April 2021

Course Project | Prof Debasattam Pal , IIT Bombay

- Analysed algorithms including **Gram Schmidt orthogonalization**, **Modified Gram Schmidt**, **Givens Rotation**, **Householder Reflectors** for decomposition of Vandermonde Matrices
- Drafted a report detailing **Runtime Analysis** and the mathematics involved causing the failure of algorithms lacking **backward stability** in different classes of Vandermonde-like matrices

Digital Systems

November 2020

Course Work | Prof Virendra Singh, IIT Bombay

- Designed a **16-bit Kogge Stone fast adder** along with XOR, MUX and NAND components to build a basic ALU using VHDL
- Utilized **Behaviour modelling** to design a FSM which plays a musical tone on **Krypton** board interfaced with a speaker

POSITIONS OF RESPONSIBILITY

Department Academic Mentor | Student Mentorship Programme

2021-22

- Among the 35 selected from **86 applicants** on the basis of extensive **interviews** and **peer reviews**
- Mentoring **4 sophomores** to help them with academics, time management and extra-curricular endeavours
- Involved in the revamp of **D-AMP blog** which consists of extensive course reviews and database of internships

Teaching Assistant | Department of Mathematics

May 2021 - June 2021

MA 108 (Ordinary Differential Equations)

- Conducted weekly **tutorial sessions** to explain concepts through applications for a batch of **40+ freshman**
- Provided assistance to the course instructors in **logistics** and in organizing proctored examinations

Teaching Assistant | Department of Chemistry

Jan 2021 - March 2021

CH 107 (Physical Chemistry)

- Conducted doubt sessions for a batch of **40+ freshman** and cleared conceptual doubts through personal interaction

Organiser | E-Summit, IIT Bombay

Feb 2020

Part of organising team responsible for on ground execution of events

- Conducted **Wolf of Wall Street** which **simulates resource management and price study**
- Organised **Sacred Games** which **replicates market competition and resource allocation**
- The two events combined saw a participation of over **60 student teams** from various colleges

TECHNICAL SKILLS

Languages

C++, Python, Julia, VHDL, Embedded C, Assembly, MATLAB, HTML

Softwares

AutoCAD, GNURadio, MSOffice, L^AT_EX, Wireshark

KEY COURSES UNDERTAKEN

Electrical Engineering

Analog Circuits, Digital Systems, Signal Processing-I, Matrix Computations, Microprocessors, Power Electronics, Control Systems, Electronic Devices and Circuits

Computer Science

Data Structures and Algorithms, Computer Networks

Mathematics

Calculus, Linear Algebra, Complex Analysis, Differential Equations

Physics

Quantum Physics and Applications, Electricity and Magnetism

EXTRA CURRICULAR ACTIVITIES

- MOOCs** - Python Data Structures, Data Science (Computation thinking with Python, Inferential thinking through simulations, Machine Learning and Predictions) 2021
- Completed a year-long training in **Kho-Kho** through National Sports Organisation(NSO) 2019
- Made a pitch for a **social entrepreneurship case study** at EnB Buzz - organised by E-Cell, IITB 2019
- Awarded **High Distinction** in **Australian National Chemistry Quiz** (ANCQ) 2016
- Represented Timpany School at **National Level Spell Bee** conducted by **WIZ** 2013
- Achieved **Distinction** in Mathematics and Science assessments conducted by **The University Of New South Wales, Australia** multiple times 2011-2013
- Received **Championship** in the 18th National Abacus Competition - Brainobrainfest 2011