



Amrit Rao
Electrical Engineering
Indian Institute of Technology, Bombay

19D070008
Dual Degree (B.Tech. + M.Tech.)
Gender: Male
DOB:

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2024	

Auxiliary Degree: Pursuing a minor degree in **Computer Sciences and Engineering**

SCHOLASTIC ACHIEVEMENTS

- Achieved a **certificate** mentioning excellent performance for ranking in **top 5%** in Digital Circuits Lab (2021)
- Received an **AA Grade** in the courses **Multi-Variable Calculus** and **Differential Equations-II** (2020)
- Secured an All India Rank of **375** in **JEE Advanced** examination among over 0.22 million aspirants (2019)
- Achieved an All India Rank of **208** in **Kishore Vaigyanik Protsahan Yojana (KVPY)** olympiad (2019)
- Stood among the **top 0.15%** in **JEE Mains** examination, competing with over 1.45 million candidates (2019)

PROFESSIONAL EXPERIENCE

Website Development and Design

(December 2020 - January 2021)

L&T Power, Vadodara

- Designed and implemented an interactive and intuitive **full stack website** from scratch for **L&T Power**
- Used **HTML5** and **CSS** in order to design the entire frontend of the website linked across **multiple pages**
- Integrated a dynamic and secure **form request system** to modify their fields using **Javascript** and **PHP**
- Managed the website backend using **MySQL**, by creating a **database** to store the responses of the forms

KEY PROJECTS

Movie Genre Prediction from posters

(April 2021 - May 2021)

CS419 Course Project | Guide: Prof. Abir De, IIT Bombay

- Modelled **CNN architectures** to classify genres from posters on **single label** and **multi label** datasets
- Applied the concept of **transfer learning**, utilized pre-trained models like **ResNet50**, **Xception** and **VGG19** and fine tuned it on the datasets to achieve a peak accuracy of **59%** and peak precision of **74%**
- Devised a **sequential CNN model** from scratch using **Tensorflow 2.0** to compare the performances

Obstacle Dodging Game in 8051

(March 2021 - April 2021)

EE337 Course Project | Guide: Prof. V Rajbabu, IIT Bombay

- Programmed an obstacle dodging game in **Embedded C** using **Keil μ Vision** and **Flip Software**
- Coded the game to track player's movements as well as score instantaneously using **8051 interrupts**
- Increased the speed of obstacles based on score using **8051 timers** and displayed it on a **16x2 LCD Module**
- Interfaced **PT-51** (8051 μ controller) to capture **keyboard keys** as input through **UART** and **Realterm**

Digital Logic Design in VHDL

(February 2021 - April 2021)

EE 214 Course Project | Guide: Prof. Maryam Baghini, IIT Bombay

- Employed **Finite State Machines** to play a music tone on a **Krypton board** using **Behavioral Modelling**
- Optimized **combinational circuit blocks** and connected their architectures using **Structural VHDL**
- Verified designs by performing simulations on all possible inputs with **Scan chains** using TIVA-C board

TECHNICAL SKILLS

- Programming** Assembly Language, C, C++, HTML5, Java, JavaScript, MATLAB, Python, VHDL
- Software** AutoCAD, Keil μ Vision, Microsoft Office, \LaTeX , GNURadio, Solidworks, Quartus
- Frameworks** BootStrap, Matplotlib, Numpy, OpenGL, Pygame, Pytorch, Pandas, Tensorflow

EXTRACURRICULAR ACTIVITIES

Technical	<ul style="list-style-type: none">Participated in the 5th edition of the annual Wipro Earthian program for schools and collegesTitled the Math Wizard from among 120+ students at Bombay Scottish School, Powai
Social	<ul style="list-style-type: none">Volunteered for wall painting and redecorated a part of the IITB campus on Republic DayHelped high school students entering into college explore various career options available to them and their respective prerequisites in association with Abhyuday and NCC, IIT BombayVolunteered to be a reader cum writer for the ICSE 2016 board examination to help students with physical disabilities attempt their board examination by writing it for them
Sports	<ul style="list-style-type: none">Participated in the 10km long Hiranandani Run conducted by Rotary Club, Mumbai LakersAttended the Annual Training Camp, a 10 day physical training camp held by NCC, IITBLearnt how to properly handle and fire 0.22 Sporting rifle in the NCC annual training camp
Culturals	<ul style="list-style-type: none">Bagged Second Prize in Insta Fashion Designing held in Bombay Scottish School, Powai

Scholastic achievements and extracurricular activities are not verified by the Placement Cell