

ADITYA MEHTA

Junior Undergraduate
Computer Science and Engineering

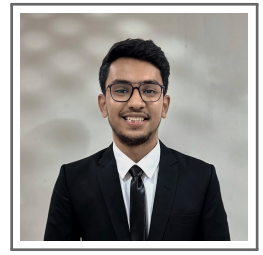
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EDUCATION

Indian Institute of Technology Gandhinagar

B.Tech in Computer Science and Engineering | CPI: 9.34/10

Gandhinagar, India
2022-2026

St. Xavier's High School, Adipur

Higher Secondary Certificate (Gujarat Secondary and Higher Secondary Education Board) | Score: 94.25%

Adipur, India
2020-2022

Archana St. Xavier's School

Secondary School Certificate (Gujarat Secondary and Higher Secondary Education Board) | Score: 94.66%

Mandvi, India
2019-2020

INTERSHIPS

AI-ML Development Intern | Kapidhwaj AI

Mentor: Mr. Neil Dhami, Industrial Intern

May'24-July'24

- Build a scalable face recognition pipeline using python libraries, ensuring high accuracy and low latency.
- Containerized the entire project into a **Docker Image** and used this to build containers on Google Virtual Machines.
- Developed the **Middleware API** script with multiple endpoints using FastAPI module, streamlining management of various model instances via API requests. Utilized **SQLAlchemy** for efficient GCP database management.

SELECTED PROJECTS

Image Processing Toolbox deployed on FPGA Hardware

Advisor: Prof. Joycee Mekie, IIT Gandhinagar • [Project Link](#)

Jan'23-Apr'23

- Established UART communication between FPGA board and a machine to serially transmit and receive Binary data on BRAMS. Used python IDE to send/receive data and Xilinx's Vivado for deployment of code on FPGA board.
- Applied various convolution filter on the given image. Set up a smooth pipeline to finally get an enhanced image.

Human Activity Recognition (HAR) using ML Models

Advisor: Prof. Nipun Batra, IIT Gandhinagar • [Project Link](#)

Jan'24-Apr'24

- Utilized the UCI-HAR dataset, which comprises time-series data capturing the activities of thirty subjects engaging in six different activities classified as walking, sitting, standing, running up, running straight and running down.
- Employed the TSFEL library for feature extraction from the time-series data, followed by Principal Component Analysis (PCA) to reduce dimensionality. Developed and trained a Decision Tree model using the extracted features.

Smart Game Engine using C/C++ programming

Advisor: Prof. Balagopal Komarath, IIT Gandhinagar • [Project Link](#)

Aug'24-Nov'24

- Leveraged advanced graph based algorithms to create a repository containing intelligent game implementations, wherein the computer utilizes optimal strategies to make moves for games like Connect4, Sudoku, TicTacToe
- Designed a cubesolver capable of generating the most efficient solutions for solving any 2x2x2 Rubik's Cube.

Smart Bicycle Safety Monitoring System with Fuzzy Control Logic

Advisor: Prof. Nithin V. George, IIT Gandhinagar • [Project Link](#)

Aug'23-Nov'23

- Developed an Android app using MATLAB for a smart bicycle to enhance child safety with real-time monitoring, detecting over-speed, falls, and boundary crossings using inbuilt sensors like gyroscope, accelerometer, GPS etc.
- Implemented real-time alerts, GPS location and emergency response features; alongside activating microphone and camera recording on the rider's device and transmitting an SOS signal with recorded data to the parent's device.

Text Generator based on next character prediction using MLP

Advisor: Prof. Nipun Batra, IIT Gandhinagar

Jan'23-Apr'23

- Built a pipeline model for predicting the next character, using the context of preceding k characters.
- Trained multiple models on diverse datasets such as Gulliver's Travels, English Wikipedia 8, Atomic Habits, Tolstoy's Essays, and Alice in Wonderland, adjusting the embedding size of the vocabulary.

ACHIEVEMENTS

- Awarded **Dean's List for Academic Excellence** for all the 4 eligible academic semesters at IIT Gandhinagar.
- Awarded **Acharya Ekkirala Bharadwaja Scholarship of Rs. 1 lakh** for excellent academic performance.
- Certified Associate Google Cloud Engineer, proficient in GCP services and best practices by Udemy | Certificate
- First Eligible candidate for Branch Change for AY 2022-23. Shifter from Electrical Engineering to CSE.
- Ranked 4th among the entire batch (across all branches) at the end of my freshman year, out of 288 students

SKILLS

Programming Languages: Python C C++ Verilog (Hardware Description Language)

Libraries: NumPy SciPy Matplotlib Seaborn Pandas Scikit-Learn TensorFlow FastAPI TSFEL

Tools: Git, Github MATLAB AutoDesk Arduino Xilinx Vivado Adobe Suite Google Cloud Platform

RELEVANT COURSES

DSA: Data Structures and Algorithms (**A or 10/10**) ; Data Centric Computing (**A- or 9/10**) ; Advanced DSA **B or 8/10**
ML: Machine Learning (**A or 10/10**) ; Calculus and Linear Algebra (**A or 10/10**) ; Probability and Statistics (**A- or 9/10**)
Others: Basic Electrical Engineering (**A or 10/10**) ; Digital Electronics (**A- or 9/10**) ; Engineering Basics (**A or 10/10**)

POSITIONS OF RESPONSIBILITY

Core Committee Member, Blithchron

Annual Cultural Fest, IIT Gandhinagar

May'23-Apr'24

- Led a diverse team of **100+ undergraduate and postgraduate students** in organizing Gujarat's largest student-run college cultural festival, demonstrating strong leadership and management skills.
- Managed the festival's budget, coordinated with multiple vendors, coordinated with Collage Administrative Body and ensured the seamless planning, execution, and delivery of all event activities.
- Learned and implemented **Adobe Creative Suite** (Illustrator, Photoshop, Premiere Pro, After Effects) to create compelling content and enhance the promotion of the festival's Social Media Handle, significantly boosting engagement on platforms like Instagram.
- Developed and executed comprehensive marketing strategies to increase festival visibility and attendance, leveraging social media and creative design skills to attract a larger audience and participants.

Student Guide and Member

Student Support Service, IIT Gandhinagar

Jan'23-Current

- Collaborated with a faculty-driven team to provide comprehensive support to students, addressing a wide range of concerns and issues related to college life.
- Offered guidance and mentorship to freshman students, helping them navigate academic challenges and personal issues, fostering a supportive and inclusive campus environment.

Class Representative

Computer Science and Engineering, IIT Gandhinagar

Apr'24-Current

- Elected as the representative for the Computer Science Engineering department, showcasing strong leadership qualities.
- Effectively communicated and represented the interests of a diverse batch of 70 students and acting as a communication bridge between Student Body and Professors.