VATS PATEL

Ahmedabad, Gujarat, 380015

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Education

School of Engineering and Applied Sciences, Ahmedabad University   **August 2021 – May 2025**
Bachelors of Technology in Computer Science and Enginerring - GPA: 3.1/4 (Current)   *Ahmedabad, GJ*

Blue Bell   **May 2021**
12th GSEB - 89.4%   *Ahmedabad, GJ*

Nirman High School   **March 2019**
10th CBSE - 90.6%   *Ahmedabad, GJ*

Relevant Coursework

- Data Structures
- Algorithms
- Signals and Systems
- Digital Design
- DBMS
- Discrete Maths
- Design & Analysis of Algorithms
- Operating Systems
- Machine Learning
- Computer Vision
- Blockchain

Projects

Decentralized Exchange (Uniswap)   *March 2024*

- Built a decentralized exchange using the concept of AMM.
- Used Uniswap V1 as a reference.
- Built custom tokens for testing and metamask for the transactions.
- Deployed the D-App on polygon Amoy testnet, open sourced the contracts and all of the code on github and hosted it on the web. [Solidity, RemixIDE, Metamask, Web3 UI - Frontend Technologies]

Driver Classification Based on Driving Patterns   *March 2024*

- Developed an unsupervised learning strategy to classify drivers based on driving behaviors using time-series data analysis techniques.
- Analyzed driving characteristics such as velocity, warning signs, and crash anticipation to identify distinct driving patterns.
- Utilized KMeans clustering and K Nearest Neighbors (KNN) algorithms for driver classification.
- Conducted data preprocessing, feature engineering, and clustering analysis to enhance the dataset's informativeness and accuracy.
- Demonstrated practical applications in road safety, driver assistance systems, and traffic management.

Road markings detection and road measurement in aerial imagery   *March 2024*

- Developed a deep learning model using UNet and ResNet-50 for detecting road markings in aerial imagery.
- Leveraged pre-trained weights from ImageNet to enhance feature learning and segmentation accuracy.
- Implemented patch-based data preprocessing to optimize model training efficiency.

Apartment Management System   *May 2023*

- Developed an efficient system for managing apartments and their associated attributes, complete with user-specific permissions and access keys for residents, owners, and leaseholders.

Cancer Probability Estimation   *April 2023*

- Developed a Cancer Probability Estimation System employing Google Colab with Python and conducted a comparative analysis of the probability estimation between two prominent methods: Gaussian Naive Bayes and a Randomized Algorithm.

Skills

Languages	Python, C, C++, Java, HTML, CSS, JavaScript
Frameworks	React
Tools	Python IDLE, Apache NetBeans, Dev C++, Google Colab Notebook, VS Code, IntelliJ IDEA
Platforms	Windows, Web
Communication	Public Speaking, Writing, Known languages - English, Hindi, Gujarati, French, Japanese

Extra Curricular Activities

Sponsorship Team Member at Ingenium   *2022*

- Did Interaction and meetings with various business owners in different fields and successfully landed some of them for the sponsorship.

Peer Tutor for Language Lab - COM 109   *Monsoon Semester 2022*

- Assumed the role of a peer tutor for the Language Lab during the monsoon semester of 2022, assisting fellow students in their language learning endeavors.

Work Experience - Internship

Web Development Internship at Acmegrade in assocaition with IIT BOMBAY   *Jan 2024*

- Proficient in HTML, CSS, and JavaScript

- Hands-on experience with modern frontend frameworks (e.g., React)

- Responsive web design and cross-browser compatibility

- Knowledge of UI/UX principles and best practices

Certifications

AWS Academy Graduate   *July 2022*

- Successfully completed *AWS Academy Cloud Foundation Course.*

- Proficient in cloud computing principles, AWS services, and infrastructure management.

- Skilled in designing and deploying cloud-based solutions, improving problem-solving capabilities.

- Utilized AWS Academy training to stay updated with modern IT practices and industry trends.

- Learnt: EC2 - Lambda - Lightsail - ECR - Current AWS Customers - Elastic Load Balancing

Machine Learning Specialization - Standford University - Ongoing   *April - June 2024*

- Covers fundamental concepts of machine learning.

- Topics include supervised and unsupervised learning, deep learning, NLP, and computer vision.

- Hands-on projects for practical application of machine learning algorithms.

Volunteer

- **Khoj Museum**   *January 2022*
  I collaborated with underprivileged children residing in a slum area to produce a brief film aimed at raising awareness about the importance of conserving water