# Vishvam Samirkumar Patel

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## EDUCATION

## Vellore Institute of Technology, Bhopal

Madhya Pradesh

Bachelor of Technology in Computer Science and Engineering; CGPA: 8.92/10

2022 - 2026 (Expected)

# TECHNICAL SKILLS

• Programming Languages: C++, Python, JavaScript

• Web Technologies: HTML, CSS, Tailwind CSS, React, Node.js

• Databases: MySQL, MongoDB

• Tools & Others: Git & GitHub, Excel, Postman

#### Work Experience

Jio Platforms Ltd.

Mumbai, India

Data Analyst Intern – Application of Machine Learning for Operational Analytics

Sep 2024 – Nov 2024

- Engineered and optimized five regression models (Linear, Ridge, Lasso, Random Forest, SVM) with feature engineering and selection techniques (Random Forest importance, correlation matrices, VIF analysis), reducing model complexity by  $\sim 25\%$  and improving predictive accuracy by 15%.
- Applied advanced time series forecasting, residual diagnostics, and hyperparameter tuning to capture underlying trends, minimizing overfitting by 20% and improving model generalization on test datasets by 12%.
- Performed statistical analysis and systematic evaluation (correlation analysis, feature refinement, performance metrics), which increased R<sup>2</sup> scores by up to 18% and delivered more stable, interpretable ML models for decision-making.
- Refined feature set by eliminating high-VIF predictors, which reduced multicollinearity by 40%+ and enhanced overall model stability across regression techniques.

#### Projects

#### Voyage Vista | HTML, CSS, JavaScript, React, Node.js, MongoDB | GitHub

- Engineered a full-stack travel platform using the MERN stack (MongoDB, Express.js, React, Node.js), delivering a mobile-responsive interface tested across desktop, tablet, and mobile devices.
- Designed and implemented RESTful APIs with Node.js and Express.js to support full CRUD operations, managing 50+ tour listings, hotel itineraries, and community reviews.
- Implemented advanced interactive features such as location-based search and filters, AI-powered chatbot, personalized recommendation engine, and a comprehensive review system to enhance functionality and user experience.
- Integrated secure user authentication and authorization using JWT (JSON Web Tokens), ensuring data protection and reliable login/sign-up functionalities.

# Traffic Genie: Smart Traffic Management | Python, YOLOv8, OpenCV, Flask, JavaScript, Chart.js | GitHub

- Built a real-time traffic monitoring system by training a custom YOLOv8 model with OpenCV to detect and classify multiple vehicle types from live video streams.
- Designed and developed a full-stack analytics dashboard using Flask, Chart.js, and Bootstrap to provide real-time visualization of vehicle counts, type distribution, and queue density per intersection.
- Enhanced scalability and responsiveness through a modular data handling pipeline and adaptive UI design, ensuring smooth and continuous real-time updates.

# Academic & Extracurricular Activities

• Practiced 100+ coding problems on LeetCode, developing proficiency in data structures, algorithms, and coding efficiency.

#### CERTIFICATIONS

- AWS Cloud Practitioner Essentials (Coursera)
- Oracle Cloud Infrastructure 2025 Foundations Associate (Oracle)
- Oracle Data Platform 2025 Foundations Associate (Oracle)