# AMAN SONI

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#### **EDUCATION**

## Bachelor of Technology in Computer Science and Engineering,

Oct 2022-Present

Vellore Institute of Technology, Bhopal

High School - HSC (90%),

Jun 2020-Mar 2021

Thakur College of Science and Commerce

**SKILLS** 

Language: Java, C/C++, Python, SQL

Front-End Technologies: HTML,CSS, React.js IDEs: Visual Studio Code ,Jupyter Notebook

Software Testing: OpenAI API, RESTful API

Soft Skills: Multi-Tasking, Problem-Solving, Critical Thinking,

Collaborative, Communication, Discipline Courses: Machine Learning, Deep Learning

CS Fundamentals: Data Structures & Algorithms, OOPS,

DBMS, Operating Systems, Computer Networks

#### **EXPERIENCE**

### **IBM DevOps Internship Course**

Jan 2025 - Apr 2025

- Designed and implemented a complete CI/CD pipeline using GitHub Actions to automate build, test (Jest), and deployment processes for a containerised MERN application.
- Deployed multi-container architecture with Docker Compose and integrated Prometheus and Grafana for real-time monitoring and visualisation of application health metrics.

### **Oracle Data Science Internship Course**

- Gained hands-on experience with the full data science lifecycle, including data wrangling, exploratory data analysis (EDA), model training, and deployment using Oracle Cloud tools.
- Applied machine learning algorithms such as linear regression, decision trees, and clustering in real-world scenarios using Python and Oracle Machine Learning.

### **PROJECTS**

**Vision Guard GitHub** 

- Developed a real-time object and people detection system using HOG + SVM and Haar Cascade, achieving ~85-90% accuracy.
- Implemented distance estimation via camera geometry and bounding box metrics for real-world obstacle proximity.
- Built an asynchronous audio guidance system with gTTS and multithreading, delivering <200ms latency and ~15-20 FPS performance.
- Tech Stack: Python, OpenCV, Flask, gTTS, Pygame, Threading, HOG.

# FinBot IQ

- Built an Al-powered personal finance chatbot using Dialogflow and Python, enabling accurate query resolution through NLPbased intent recognition and entity extraction.
- Integrated MySQL database with secure backend APIs to handle real-time financial data retrieval, ensuring efficient and reliable chatbot responses.
- Built a responsive web interface using HTML, CSS, and JavaScript.
- Tech Stack: Dialogflow, Python, MySQL, HTML, CSS, JavaScript, RESTful APIs, NLP.

#### **Stock Market Prediction Model**

**GitHub** 

- Built a custom OpenAI Gym environment and trained a Dueling Deep Q-Network (DQN) agent to make buy/hold/sell decisions using historical OHLCV data and technical indicators (RSI, MACD, Bollinger Bands).
- Achieved a peak Sharpe Ratio of 9.12 through reward engineering, rolling window training, and performance visualisation across 500+ episodes using reward curves, equity growth, and risk-adjusted metrics.
- Tech Stack: Python, PyTorch, Gym, TA-Lib, Pandas

### **ACHIEVEMENTS**

- Secured a rank in the top 5 out of 700+ students in the Fintech Hackathon conducted by the Fintech Club.
- Secured AIR 1 in the Jim Corbett Exam.
- Represented the College in Football at the State Level.

#### POSITIONS OF RESPONSIBILITY

Lead of the Content Team at the UX Club

May 2024- Present

- Lead a team of 100 members in the Club's various events organised at the University.
- Managed conflict resolution and ensured a safe, enjoyable environment for participants and attendees.
- Organised and supervised team meetings, delegating tasks effectively to enhance event efficiency.