VINAYAK VIVEK JOSHI

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PROFESSIONAL SUMMARY

Computer Science undergraduate with expertise in Machine Learning, Deep Learning, Generative AI, and full-stack development. Skilled in designing scalable AI-driven solutions with strong software engineering practices.

EDUCATION

Vellore Institute of Technology — **Chennai, Tamil Nadu**
Bachelor of Technology in Computer Science and Engineering — *August 2023 – Present*

- CGPA: 8.74/10.0
- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Computer Networks, Database Management Systems, Software Engineering, Object-Oriented Programming

Alard Public School — **Hinjewadi, Maharashtra**
Senior Secondary Education — *2022 – 2023*

- Percentage: 85%

Blossom Public School — **Tathawade, Maharashtra**
Secondary Education — *2020 – 2021*

- Percentage: 94%

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java
Machine Learning and AI: Scikit-learn, TensorFlow, PyTorch, Hugging Face, Natural Language Processing (NLP), Large Language Models (LLM), Prompt Engineering, Model Deployment
Data Science and Analytics: NumPy, Pandas, Matplotlib, Seaborn, Plotly, Statistical Analysis, Feature Engineering, Data Visualization, Data Preprocessing
Databases and Cloud Platforms: SQL, Firebase, Supabase, Streamlit Cloud, Render, Cloud Deployment
Web Development: React.js, Flask, RESTful APIs
Development Tools: Git, GitHub, Docker

EXPERIENCE

Machine Learning Developer — **Personal Projects**
Self-Directed Projects and Independent Development — *May 2024 – Present*

- Developed a **Movie Recommendation System** using **collaborative filtering** and **sentiment analysis**, enabling personalized content discovery.
- Built a **Car Price Predictor** with **regression models** and **feature engineering** to estimate vehicle prices from specifications.
- Implemented a **Spam Mail Detection System** leveraging **NLP techniques** and **classification algorithms**, improving filtering accuracy.
- Created a **Financial Reviews Sentiment Analysis Tool** to analyze customer feedback and extract actionable business insights using **NLP**.
- Currently developing an **Intelligent Image Captioning System** using **Hugging Face transformer models** to automatically generate natural language descriptions of visual images.
- Building a **VM Placement Optimization System** for **CDNs** with **artificial neural networks**, aiming to minimize latency and improve resource allocation efficiency.

PROJECTS

Diabetes Prediction System | GitHub — Python, Scikit-learn, Streamlit

- Developed machine learning web application achieving 81.1% accuracy in diabetes risk assessment using **Logistic Regression** on clinical datasets.
- Implemented feature engineering pipeline processing 8 clinical parameters.
- Deployed production application on **Streamlit Cloud** with interactive dashboard.

Rainfall Prediction System | GitHub Python, Flask, XGBoost

- Developed weather prediction web application achieving 82.43% accuracy using **XGBoost classification** and meteorological data analysis.
- Processed 10+ weather parameters to improve predictive performance.
- Built responsive **Flask web interface** for real-time user interaction.

AI Story Generation Platform | GitHub Python, Flask, Google Gemini API

- Developed intelligent content generation platform with **Google Gemini API** integration and customizable story parameters.
- Implemented multi-language support (5 languages), story continuation features, and genre-specific narrative generation.
- Integrated **text-to-speech** and export functionality (PDF/TXT) with responsive Flask backend and modern UI.

Car Price Predictor | GitHub Python, Flask, Scikit-learn, HTML/CSS/JavaScript

- Developed full-stack machine learning web application predicting used car prices using **Linear Regression** with 84% R-squared accuracy.
- Implemented feature engineering and preprocessing pipeline for multiple car specifications.
- Built interactive and responsive frontend using **HTML5, CSS3, JavaScript** integrated with **Flask** backend.

CERTIFICATIONS

IBM Generative AI for watsonx.ai — Enterprise-level generative AI applications.

ACHIEVEMENTS

Maintained academic excellence with **8.74/10 CGPA** in Computer Science and Engineering.

Deployed **3+ machine learning and web applications** across healthcare, education, and entertainment domains.

Developed and implemented AI solutions using **Python, ML, NLP, and Generative AI** technologies.

Built a comprehensive **GitHub portfolio** demonstrating full-stack development, ML engineering, and deployment expertise.