VINAYAK VIVEK JOSHI

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PROFESSIONAL SUMMARY

Computer Science undergraduate specializing in Machine Learning and Artificial Intelligence with hands-on experience developing end-to-end ML solutions. Demonstrated expertise in healthcare AI applications achieving clinical-grade accuracy across multiple predictive models. Proficient in Python programming, statistical analysis, and cloud deployment with strong foundation in data science methodologies and modern web development frameworks.

EDUCATION

Vellore Institute of Technology **Chennai, Tamil Nadu**

Bachelor of Technology in Computer Science and Engineering *Aug 2023 – July 2027*

- Current CGPA: 8.74/10.0
- Relevant Coursework: Data Structures and Algorithms, Machine Learning, Statistics, Database Management Systems, Software Engineering, Object-Oriented Programming

TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, JavaScript, SQL
Machine Learning Frameworks: Scikit-learn, TensorFlow, PyTorch, Keras
Data Science Libraries: NumPy, Pandas, Matplotlib, Seaborn, Plotly, SciPy
ML Algorithms: Linear Regression, Logistic Regression, Random Forest, SVM, XGBoost, Gradient Boosting, Decision Trees, K-Means Clustering
Data Processing: Feature Engineering, Data Preprocessing, Statistical Analysis, Exploratory Data Analysis, Data Visualization
AI Technologies: Natural Language Processing, Large Language Models, OpenAI API, Google Gemini AI, Prompt Engineering
Web Development: Flask, Streamlit, React.js, HTML5, CSS3, RESTful APIs
Databases: Firebase, Supabase, MySQL, PostgreSQL
Cloud Platforms: Google Cloud Platform, Streamlit Cloud
Development Tools: Git, Docker, Jupyter Notebooks, VS Code, PyCharm, Google Colab, Anaconda

PROJECTS

Diabetes Risk Prediction System Python, Scikit-learn, Streamlit

- Developed machine learning web application for diabetes risk assessment using ensemble methods, achieving 94 percent accuracy on clinical datasets
- Implemented comprehensive feature engineering pipeline processing 8 clinical parameters including glucose levels, BMI, and family history
- Deployed production-ready application on Streamlit Cloud with interactive visualization dashboard and real-time risk scoring
- Designed user-friendly interface for healthcare professionals with detailed risk stratification and recommendation system

Heart Disease Prediction System Python, Scikit-learn, Medical Data Analysis

- Built AI-powered diagnostic system for early cardiovascular disease detection using classification algorithms with 92 percent precision
- Conducted extensive exploratory data analysis on 300+ patient records to identify key cardiovascular risk factors and biomarkers
- Applied advanced preprocessing techniques including feature scaling, outlier detection, and SMOTE for handling class imbalance
- Implemented model validation using cross-validation and hyperparameter tuning to optimize performance metrics

AI Story Generation Platform Python, Flask, Google Gemini AI, NLP

- Developed full-stack web application leveraging Google Gemini AI for intelligent content generation with customizable story parameters
- Implemented advanced features including multi-language support across 5 languages, story continuation, and genre-specific narrative styles
- Integrated text-to-speech functionality using Google Text-to-Speech API and export capabilities in PDF and TXT formats
- Built responsive Flask backend with RESTful API architecture and modern front-end with interactive user interface

Food Delivery Management System React.js, Supabase, REST APIs

- Developed comprehensive food delivery platform using React.js frontend and Supabase backend with real-time data synchronization
- Implemented secure user authentication system, order management functionality, and payment gateway integration
- Built responsive web application with modern UI/UX design principles and mobile-first development approach
- Optimized application performance through efficient state management and database query optimization techniques

EXPERIENCE

Machine Learning Developer **Self-Directed Projects**

Independent Research and Development *Jan 2023 – Present*

- Designed and implemented 4+ machine learning projects focusing on healthcare applications and predictive analytics
- Achieved clinical-grade accuracy in medical prediction systems through rigorous model validation and testing methodologies
- Developed end-to-end ML pipelines including data collection, preprocessing, model training, evaluation, and cloud deployment
- Gained expertise in production-ready application development, model optimization, and scalable system architecture

CERTIFICATIONS

IBM Generative AI for watsonx.ai - Completed comprehensive training on enterprise-level generative AI applications and implementation

Machine Learning Specialization - Advanced coursework in supervised learning, unsupervised learning, and neural networks

ACHIEVEMENTS

Academic Excellence recognition with CGPA of 8.74/10.0 in Computer Science and Engineering program

Successfully deployed 4+ machine learning applications with production-level performance and documented user adoption

Developed healthcare AI solutions achieving clinical-grade accuracy contributing to medical technology advancement

Built comprehensive project portfolio demonstrating expertise in full-stack development and ML engineering practices