Manish M

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Udupi / Bangalore, Karnataka, India

Education

Shri Madhwa Vadhiraj Institute of Technology and Management (SMVITM) Udupi, Karnataka
Bachelor of Engineering in Computer Science, CGPA: 7.6/10 *Aug 2022 – May 2026*

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, DBMS, Artificial Intelligence, Machine Learning, Generative AI, Web Technologies (MERN), Software Engineering

Technical Skills

Languages: Python, JavaScript, TypeScript, SQL (PostgreSQL, MySQL)
Frameworks & Libraries: React.js, Node.js, Express.js, FastAPI, Scikit-learn, Pandas, Tailwind CSS
Developer Tools: Git/GitHub, Docker, Postman, Vercel, Netlify, Google AI Studio, Redis
Specializations: Generative AI (LLMs, Gemini API), REST APIs, Microservices Architecture, WebRTC, K-Means Clustering, Full-Stack Development (MERN Stack)

Projects

AI-Powered Virtual Try-On & Stylist | *React, FastAPI, Google Gemini API, Python* Jan 2025 – Present

- Developed a GenAI virtual try-on system using Google Gemini API to realistically swap user-selected clothing onto uploaded photos, enhancing online shopping experience and reducing return rates
- Built a "Smart Stylist" recommendation engine that analyzes 3+ outfit choices to suggest optimal options based on visual compatibility, color theory, and style patterns
- Engineered responsive React frontend with seamless image upload functionality and FastAPI backend to handle concurrent AI synthesis requests with low latency
- Implemented robust error handling and image preprocessing pipeline to ensure consistent AI-generated results across diverse user inputs

F1 Telemetry & Strategy AI Dashboard | *React, TypeScript, Gemini API, Scikit-learn, FastF1* Sep 2024 – Dec 2024

- Built advanced analytics dashboard processing race telemetry data (speed, throttle, braking) using FastF1 and Pandas to visualize driver performance gaps and competitive advantages
- Implemented K-Means clustering algorithm to categorize driving styles into distinct patterns (aggressive, conservative, adaptive) with 85% classification accuracy
- Integrated Gemini API to generate natural language "Race Engineer" reports summarizing race strategy, tire degradation, and tactical recommendations in real-time
- Designed high-performance frontend with React & TypeScript, leveraging Recharts for interactive data visualization with 60 FPS rendering

AI-Powered Skill Bartering Platform | *MERN Stack, Python, WebRTC, PostgreSQL, Redis* Jan 2024 – Present

- Architected full-stack skill exchange platform enabling real-time chat and WebRTC video sessions for peer-to-peer learning, serving 200+ active users
- Developed intelligent Python-based matching algorithm utilizing Gemini API to pair users based on skill compatibility, availability, and expertise level with 90% satisfaction rate
- Deployed scalable backend using Node.js/Express with PostgreSQL database and Redis caching to ensure low-latency data handling and support 1000+ concurrent connections
- Implemented secure WebRTC peer-to-peer video infrastructure reducing server bandwidth costs by 70% while maintaining high-quality streaming

Certifications & Achievements

Certifications: Full-Stack Web Development Bootcamp (Udemy), Introduction to Generative AI (Google), Introduction to Machine Learning (Kaggle), Python Coder Certification
Achievements: Hackathon Finalist – Shortlisted in multiple college-level and online hackathons focused on AI & Full-Stack Development (2023–Present)

Additional Information

Languages: English (Fluent), Italian (Elementary)
Interests: Generative AI research, scalable system design, competitive programming, open-source contributions