

Preetham Reddy Dodda

Rolla, Missouri, United States | preetham.dodda27@gmail.com | (573) 647-2567 | github.com/Preetham2702 | linkedin.com/in/preetham-reddy-dodda

EDUCATION

Missouri University of Science and Technology

B.S., Computer Science, GPA: 3.7

Aug 2023 - May 2027

SKILLS

Programming Languages: Python, C++, JavaScript, TypeScript, SQL, MATLAB, HTML, CSS

Frameworks & Libraries: React, FastAPI, Flask, OpenCV, TensorFlow, PyTorch, NumPy, Pandas, Matplotlib

Databases: PostgreSQL, Redis, PGVector, MySQL, MongoDB

Tools & Software: Docker, Linux, Git, GitHub, Bash, Supabase, Visual Studio, Google Suite, Android Studio, Xcode

Cloud Platforms: AWS, Azure, Google Cloud

WORK EXPERIENCE

Full-Stack Developer

Dec 2025 - Present

Missouri University of Science and Technology

- Developed a distributed digital twin platform using React, TypeScript, and FastAPI, building scalable backend services for real-time monitoring and coordination of CNC, laser cutting, and metal 3D printing systems.
- Built high-performance, low-latency WebSocket-based data streaming services for real-time machine telemetry, enabling concurrent monitoring of production status, operational performance, and manufacturing events.
- Designed and implemented scalable FastAPI REST APIs and AI-powered OpenCV pipelines for automated print defect detection and removal, improving manufacturing reliability and automation.

Software Engineering Intern – Manufacturing AI & Data Systems

May 2025 - Aug 2025

Missouri University of Science and Technology

- Developed scalable Python ETL pipelines to ingest, validate, and process over 60,000 manufacturing sensor files, supporting machine learning, process optimization, and manufacturing analytics.
- Designed and implemented a Flask + PostgreSQL backend platform for scalable dataset management, metadata extraction, and data retrieval, reducing manual data entry by 85% while improving data quality.
- Collaborated with researchers and cross-functional teams to design scalable backend data workflows supporting Design, In-Process, and Post-Process manufacturing analytics.
- Tested backend APIs and data pipelines to ensure reliable data processing and system performance.

Software Developer

Aug 2024 - Jan 2025

Missouri University of Science and Technology

- Programmed a MATLAB-based program for 3D modeling and visualization of soil specimens during triaxial shear tests, enhancing measurement accuracy to over 99.9%.
- Automated detection and correction of specimen misalignment, eccentricity, and leakage, significantly improving data reliability and experimental efficiency.
- Validated computational models by comparing test data with real-world measurements, ensuring accuracy in geotechnical simulations and stress-strain analyses.

PROJECTS

AI-Powered Emergency Detection System |

March 2026 - March 2026

- Developed a computer vision pipeline using Python, OpenCV, and Google Cloud Vision API to analyze CCTV video streams and detect falls, violent activities, and emergency events in real time.
- Integrated Gemini API and Vertex AI to combine computer vision outputs with contextual reasoning for intelligent real-time emergency response.
- Designed a modular Python backend pipeline to process surveillance video streams and generate low-latency real-time alerts for emergency detection applications.

Figma-to-Production AI Agent |

Jul 2026 - Present

- Built an autonomous Figma-to-production AI agent that extracts raw design data, constructs Design Graphs, and analyzes screens, components, layouts, interactions, and navigation flows.
- Engineered a deterministic Analyzer and LLM-powered Semantic Engine using graph reasoning, context slicing, schema-constrained inference, confidence scoring, provenance tracking, and anti-hallucination guardrails.
- Implemented end-to-end React/TypeScript code generation, visual validation, and design-to-code synchronization; currently fine-tuning semantic models using SFT, RL-based optimization, evaluation datasets, and Hugging Face TRL