

Shivaganesh Nagamandla

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EDUCATION

University of Central Florida

Bachelor of Science - Computer Science (Dean's List, Bright Futures Scholar)

Orlando, FL

Dec. 2026

EXPERIENCE

Software Developer

Apr. 2025 – Present

Knights Experimental Rocketry

Orlando, FL

- Created a mission control script for Raspberry Pi using Bash and SSH, enabling ground engineers to initialize relay-controlled systems and telemetry containers over WiFi, reducing setup time by 80%
- Implemented live telemetry logging from DAQ using Python TCP sockets, capturing 20,000+ sensor data points per test for post-mission analysis
- Developed real-time load cell and pressure transducer graphs using React and TypeScript, enabling engineers to monitor 4+ telemetry streams from QuestDB during 3+ static fire operations
- Integrated control board input with the telemetry frontend and relay system using Python and React, enabling synchronized UI state updates and actuation of 8+ relays during test procedures

Software Engineer Intern

May. 2024 – Aug. 2024

Hexaider Technologies

Maitland, FL

- Developed Spring Boot APIs within a flight reservation microservice, achieving a 28% increase in transaction success rates during peak booking windows
- Engineered a solution to convert Kafka flight event streams into structured updates for a React.js dashboard
- Managed 6 GitLab CI configurations, minimizing build overhead for airline microservices by 25%

PROJECTS

DocuLens (GemiKnights 2025) | React, Node.js, TypeScript, Firebase, Google Gemini API, Docker

Jul. 2025

- AI-powered, helps immigrants identify errors in tax forms through document scanning and plain-English explanations
- Integrated Google Gemini API with OCR fallback processing, handling PDFs with real-time status tracking
- Implemented secure file validation, rate limiting, and error handling with comprehensive logging and monitoring for production deployment

Google Gemini MCP Tool | TypeScript, Node.js, MCP SDK, Bash

Jun. 2025

- Built an MCP server integrating Claude AI with Gemini CLI for seamless 2M+ token codebase analysis
- Created a token-aware routing system to offload large requests to Gemini models, cutting Claude token usage by 60%
- Implemented sandboxed code execution, multi-model support, structured response validation and behavioral flags

LyricLingo | React, Node.js, MongoDB, Express, Redis, Cheerio, JavaScript

Feb. 2025 - Mar. 2025

- Developed a full-stack language learning app leveraging Spotify, Genius, and DeepL APIs with JWT authentication, enabling real-time lyric translations in 9+ languages at 95% accuracy
- Engineered a custom language auto-detection and lyric deduplication algorithm, reducing external API costs by 40%
- Built an NLP pipeline with Hugging Face's RoBERTa model to classify lyrics into 28 emotion categories
- Utilized Redis caching for flashcards and sentiment analysis, reducing load times 3+ seconds to under 200ms

Template Portfolio Website | HTML5, CSS3, JavaScript

Jan. 2025

- User-friendly portfolio template for UCF computer science students and software engineers, adopted by 20 students
- Built a responsive, minimalist portfolio website using vanilla JavaScript with custom interactive features including theme toggle, cursor follower, and optimized CSS for fast loading

TECHNICAL SKILLS

Programming Languages: Python, Bash, Java, JavaScript, TypeScript, C, SQL, HTML, CSS

Frameworks: React.js, Next.js, Node.js, Express.js, Spring Boot, Tailwind, NumPy, Pandas

Developer Tools: Git, Linux, Raspberry Pi, Docker, Postman, Jira, Visual Studio, CLion, Eclipse