

# SIVA KUMAR PADALA

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## Summary

Full-stack developer with AI/ML expertise in React.js, Python, LangChain, and RAG systems, experienced in building intelligent applications and optimizing platforms for performance and scalability.

## Technical Skills

**Languages:** Python, HTML, CSS, SQL  
**Frontend & Backend:** React.js, Redux.js, Tailwind CSS, FastAPI, REST APIs, WebSockets  
**AI & ML:** Prompt Engineering, LLM Integration, RAG, LangChain, Hugging Face, Scikit-learn, Pandas, NumPy  
**Databases & Cloud:** MongoDB, SQL, AWS, Git, GitHub  
**Tools & Concepts:** VS Code, Postman, Jira, API Integration, Modular Architecture, OOPs, Data Structures, Agile

## Education

**Pragati Engineering College** 2020-2024  
*Bachelor of Technology in Electronic And Communication (GPA: 7.02/ 10.00)* Surampalem, Andhra Pradesh

## Projects

- RAG-Based Web Intelligence System | Python, LangChain, ChromaDB, RAG, Playwright, BeautifulSoup** Repository
- Built AI-powered web scraping platform using **RAG** and **LangChain** to automate website analysis, reducing manual extraction time by 85% and enabling semantic search across 1,000+ pages.
  - Engineered modular pipeline with 11+ specialized analyzers using **Playwright** and **BeautifulSoup**, achieving 95% extraction accuracy on dynamic JavaScript websites.
  - Implemented **ChromaDB** vector search for natural language querying, improving retrieval relevance by 90% with multi-format exports (Excel, JSON, CSV).
- AI MATE - Intelligent Document Chatbot | React, Python, FastAPI, LangChain, Ollama, ChromaDB** Repository
- Built privacy-first chatbot (**React**, **TypeScript**, **FastAPI**) with PDF/DOCX/image ingestion for document-aware conversations using 100% on-device processing.
  - Architected local **RAG** pipeline with **LangChain**, **ChromaDB**, and **Ollama** for offline LLM execution, eliminating cloud data exposure.
  - Implemented streaming UX with **WebSockets/SSE** and parallelized OCR processing using multiprocessing, achieving 3x faster throughput.
- Netflix Assist GPT - AI Movie Companion | React.js, Tailwind CSS, Redux, Firebase** Repository
- Developed a Netflix-inspired web application using **React.js** and **Tailwind CSS**, integrating **Google Gemini API** for personalized movie recommendations based on user preferences.
  - Implemented **Redux.js** for centralized state management and memoization to optimize API calls, reducing unnecessary re-renders by 50%, while utilizing **Firebase** for user authentication and streamlined login processes.

## Certifications & Achievements

**Agentic AI – DeepLearning.AI** 2025  
**Namaste Node.js & React – NamasteDev.com** 2024  
**Achievements:** Completed 3+ hands-on projects in AI/ML and full-stack development.