

Shreerama Shiva Sai Bharadwaja

Full-Stack & AI Engineer — Building Agentic Systems for Web & Data Intelligence

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SUMMARY

Full-Stack AI Engineer experienced in building **agentic automation systems**, **AI-integrated web apps**, and **scalable data pipelines**. Strong background in **LangChain**, **vector databases**, **React/Next.js**, **Node.js**, and **Python**, bridging AI reasoning with durable cloud execution. Previously led multi-disciplinary teams in hardware-AI integration, filed two patents, and developed RAG systems + LLM-powered workflows.

CORE SKILLS

AI/Agents: LangChain, LlamaIndex, OpenAI SDK, Prompt Engineering, Vector Databases (Chroma, FAISS), Multi-Agent Systems

Full Stack: Next.js, React, Express.js, Node.js, MongoDB, Supabase, REST APIs, n8n

Data/Infra: Python, Pandas, FastAPI, Docker, CI/CD, Workflow Automation, WebSockets

Tools: TypeScript, Tailwind, GitHub Actions, Cloud Deployment (Vercel, GCP Basic)

Bonus: MLOps, LLM Evaluation, Chrome Extensions, Real-time Monitoring

EXPERIENCE

ThinkMetal Pvt Ltd — Founding Engineer, NPD Lead Jan 2023 – Present

- Spearheading the design and simulation of a next-generation metal 3D printer, focusing on high-precision manufacturing and process optimization.
- Leading RD on toolhead and furnace system development, integrating advanced material handling, heat control, and automation principles.
- Collaborating with cross-functional teams to transform conceptual designs into manufacturable systems.

Semi-Conductor Laboratory — Team Lead, Automation Project Jan 2022 – Aug 2022

- Developed deep learning-based **pick-and-place system** using TensorFlow & OpenCV.
- Improved visual alignment accuracy by 30% through model-driven pipeline optimization.
- Deployed ML models into industrial workflow environments under a senior scientist.

Nottingham Trent University (UK) — Research Associate Jul 2021 – Jul 2022

- Designed computational pipelines for **cranial implant optimization** using Python & Ansys.
- Simulated medical-grade 3D printing for PEEK materials under high thermal conditions.

LISTED PROJECTS

Multi-Agent Trading Workflow (Pydantic, LangChain, n8n, Python)

- Built an agentic RAG system for trade signal analysis and autonomous decision workflows.
- Integrated retrievers, re-rankers, and agent chains using OpenAI API.
- Optimized compute and data flow with async caching and parallel agent execution.

Ranking RAG System (Python, Cohere, Supabase)

- Implemented a retrieval-augmented LLM pipeline for contextual company insights.
- Used OpenAI embeddings and re-ranking for improved accuracy and lower latency.

BoilerSaaS (Next.js, Supabase, Tailwind, GitHub Actions)

- Built a full SaaS starter with authentication, payments, and CI/CD automation.
- Designed for scalability — ideal for **agentic SaaS dashboards**.

PDF Helper (Next.js, TypeScript, Node.js)

- Developed a full-stack document processing platform with drag-and-drop UI.
- Deployed on Vercel, handling concurrent file operations with monetization.

Real-Time Chat App (MERN + WebSockets)

- Built full-duplex messaging system using **Socket.io + JWT auth**.
- Designed for low-latency, durable messaging suitable for agent coordination UX.

YouTube Summarizer (Python, LangChain)

- Extracts transcripts, applies LLM summarization & topic segmentation for research videos.
- Designed extension-ready backend architecture for agentic knowledge extraction.

EDUCATION

B.E. – Mechanical Engineering, Panjab University (UIET)
GPA: 7.87 / 10

2019 – 2023

PUBLICATIONS & PATENTS

- Patent: *Intelligent Patient Care Bed* (2021)
- Patent: *Active Transradial Bionic Prosthetic Arm* (2022)
- 2 Research Papers on *Cranial Implant Optimization* (SAGE Journals)