

SHIVANE RATAN

SOFTWARE ENGINEER

WORK HISTORY

TEACHING ASSISTANT

PES University
July 2025 - December 2025

- Served as Teaching Assistant for the "Large Language Models" course, supporting the delivery of advanced units on RAG, Agents, and Prompt Engineering.
- Curated comprehensive technical materials, including slide decks, lecture notes, and Question Banks (QB) to simplify complex Generative AI concepts for undergraduate students.
- Evaluated student projects and assignments on LLM applications, providing detailed feedback on code quality, system design, and architectural choices.

ACADEMIC BACKGROUND

PES UNIVERSITY

Bengaluru, Karnataka
December 2021 - June 2025

- Received a Bachelor of Technology degree in Computer Science
- GPA: 8.5

PROJECTS

HOTEL BOOKING APPLICATION

- Engineered a full-stack reservation platform using React, TypeScript, and Node.js, integrating Stripe for secure payments and Cloudinary for image optimization, which improved page load speeds by 40%.
- Designed scalable RESTful APIs with Express.js and MongoDB to manage real-time inventory and complex search queries, achieving sub-200ms latency for property filtering and availability checks.
- Implemented comprehensive End-to-End (E2E) testing using Playwright, covering critical workflows like authentication and checkout, which reduced production deployment errors by 30%.

Technologies: React, TypeScript, Node.js, Express, MongoDB, CSS, Stripe, Cloudinary, and Playwright

AI-POWERED RESUME SCREENING SYSTEM

- Architected a Multi-Agent RAG System using LangChain and Model Context Protocol (MCP) to automate resume screening, reducing manual review time by 75%.
- Engineered a Semantic Search Engine with ChromaDB and HuggingFace embeddings, achieving for retrieving relevant candidates from a dataset of 500+ resumes.
- Developed a Custom MCP Server in Python to expose local vector data as an autonomous tool, enabling external AI agents (like Claude) to perform secure, privacy-first data retrieval.

Technologies: Python, LangChain, Model Context Protocol (MCP), ChromaDB, HuggingFace Embeddings, Streamlit

TECHNICAL SKILLS

- Languages: Java, Python, C++, JavaScript
- Databases: MySQL, MongoDB
- Frameworks/Tools: Spring Boot (MVC), Express.js, Node.js, React.js
- Systems Knowledge: REST APIs, Microservices
- Other Skills: Agile Development, Git