

# Atharva Shirke

Software Engineer (R&D)

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## About

Results oriented Software Engineer with 1.3 years of experience in Python backend development, server management, and GenAI. Proficient in leveraging Data Structures, Algorithms to deliver scalable solutions. Adept at driving innovation and rapid adoption of emerging technologies in Agile environments.

## Experience

### Software Engineer.

Persistent Systems Limited. · Pune, India

Sep '23 - Present

- Leveraged YOLO for real-time business use cases, achieving a 17% improvement in detection accuracy and reducing processing time by 12%, enhancing operational efficiency.
- Collaborated on creating a custom GPT model using LangChain and LlamaIndex, integrating advanced Retrieval-Augmented Generation (RAG) techniques to streamline information retrieval processes.
- Designed and implemented embeddings using OpenAI and Ollama, managed within vector databases such as Pinecone, leading to a 23% improvement in retrieval accuracy and a 13% reduction in query response times.
- Developed React-based applications for Mixed Reality (MR) and Augmented Reality (AR) Proof of Concepts (POCs), showcasing innovative solutions tailored to business needs.
- Designed and implemented backend systems using FastAPI and MongoDB, ensuring efficient data management and robust application performance.

### Software Engineer Intern.

Persistent Systems Limited. · Remote

Jun '23 - Sep '23

- Gained hands-on experience with Salesforce development and its implementation in real-world scenarios.
- Successfully solved problem statements using Java, HTML5, CSS3, and JavaScript, demonstrating strong programming and web development skills.
- Acquired in-depth understanding of Salesforce features, functionality, and best practices for implementation.
- Developed applications and solutions using Python, enhancing proficiency in software development and scripting.

### Machine Learning Intern.

Knowledge Solutions India · Remote

Jul '21 - Sep '21

- Gained hands-on experience in designing and implementing machine learning solutions, contributing to data-driven decision-making processes.
- Acquired a comprehensive understanding of machine learning algorithms and their behaviors, enhancing problem-solving capabilities.
- Developed foundational knowledge of neural networks, including their architecture and training methodologies, for advanced predictive modeling.
- Designed and trained a machine learning model for heart disease recognition, achieving a 68% improvement in prediction accuracy, supporting early detection during model training and evaluation phases.

## Skills

**Development:** Python, Java, JavaScript, React

**Database Management:** SQLite3, Vector DB, MongoDB, MySQL

**Web Technologies:** Fast API, Django, PHP

**Cloud Technologies:** Linux, AWS

**Others:** Langchain, Fine-tuning LLM, Retrieval Augmented Generation.

## Projects

**Custom RAG:** [github.com/atharva2001/CustomRAG](https://github.com/atharva2001/CustomRAG)

**Tech Stack:** FastAPI, Python, Langchain

Created a custom RAG system tailored to a specific business need. Explored data storage and retrieval processes to optimize functionality.

**Freelancers:** [github.com/atharva2001/Freelancers](https://github.com/atharva2001/Freelancers)

**Tech Stack:** Django, Python, SQLite3

A Django Web App connecting freelancers with job opportunities, simplifying the process of finding work.