Gaurav Arora

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Education

Pennsylvania State University

B.S.(Engineering) in Computer Science

WORK EXPERIENCE

Northcorp Software

Junior Software Engineer

• AI-Enhanced Document Retrieval System:

- $\circ~$ Developed a RAG (Retrieval-augmented generation) system processing 100+ document embeddings in Pinecone, reducing the query response time by 40%.
- Implemented context-aware LLM querying with 85% relevance accuracy for domain-specific information retrieval.

• Resume Parser:

- Created a Python parsing tool that extracts 10+ key resume details with 80% precision using regex.
- $\circ\,$ Generated comprehensive PDF reports with extracted metadata, reducing manual review time by 75% for HR professionals.

Projects

- AI-Powered Chatbot (Python, Flask, HTML, CSS, JavaScript):
 - Developed a web-based chatbot application leveraging the Llama-2 LLM within the Flask framework, demonstrating full-stack development skills.
 - $\circ~$ Designed a responsive user interface using HTML and CSS, ensuring seamless and intuitive user interaction.
 - Implemented context-sensitive real-time chat responses using Llama-2, enhancing user engagement.

• Storage System for Cryptocurrency (C):

- Engineered a comprehensive module for JBOD (Just a Bunch of Disks) operations in a cryptocurrency storage system, utilizing 16 hard disks.
- Developed advanced command encoding, address translation, and block-disk seeking functionalities to optimize system performance.
- Created a dynamic caching system to reduce disk access times, implementing efficient cache management strategies.

• Hotel Management Web Application (MySQL, PHP, HTML):

- Designed and developed a web-based platform for hotel reservation management using MySQL, PHP, and HTML.
- Implemented complete CRUD operations on reservations with a robust MySQL database backend.
- Optimized database performance through the strategic use of indexing and primary key constraints.

• Room Scheduling Application (Java Swing, SQLite):

- Created a scheduling application for educational institutions using Java Swing and SQLite.
- Developed an intuitive, user-friendly GUI with drop-downs, buttons, and tabs to enhance user experience.
- $\circ~$ Integrated SQL ite database using JDBC, demonstrating advanced database design skills.
- $\circ~$ Implemented advanced features like wait listing to improve application utility.

Skills

- Programming Languages: C, C++, Java, Python, HTML, CSS, JavaScript, PHP
- Tools/ Frameworks: Git, GitHub, GDB, Flask, Vim, Jinja2, LLamaIndex, LangChain
- **Certifications**: Prompt Engineering with Llama 2&3
- Other Skills: MySQL, Pinecone, API Integration, LLM Application, Linux

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Sep 2024 - Present

State College, PA, USA Aug 2023