Gaurav Arora

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EDUCATION

Pennsylvania State University　State College, PA, USA
B.S.(Engineering) in Computer Science　*Aug. 2023*

WORK EXPERIENCE

Northcorp Software　Gurugram, India
Junior Software Engineer　*Sep 2024 - Present*

- **Vector Database with RAG and LLM**: Created vector embeddings using the Pinecone database and implemented a Retrieval-Augmented Generation (RAG) chain. Enabled querying an LLM to generate responses tailored to specific prompts.
- **Resume Parser**: Developed a Python-based tool to parse resumes and extract key details using the 're' library. Designed a preview page using Jinja2 for review, and generated a new PDF containing the extracted information along with the original resume appended.

PROJECTS

- **AI-Powered Chatbot (Python, Flask, HTML, CSS, JavaScript)**:　Sep. 2023
  Developed a web-based chatbot application leveraging the Llama-2 LLM within the Flask framework.
  - Designed a responsive user interface using HTML and CSS for seamless interaction.
  - Integrated Llama-2 for real-time, context-aware chat responses, enhancing user engagement.
  - Added error-handling and feedback mechanisms to maintain usability during API or system issues.
- **Storage System for Cryptocurrency (C)**:　May. 2023
  Implemented a secure and efficient storage system for a cryptocurrency startup using 16 hard disks in a JBOD (Just a Bunch Of Disks) configuration.
  - Engineered a module to handle JBOD operations, including command encoding, address translation, and block-disk seeking.
  - Developed a caching system to reduce disk access times, featuring dynamic allocation and efficient cache management.
  - Built network communication functions to enable remote manipulation of JBOD systems.
- **Hotel Management Web Application (MySQL, PHP, HTML)**:　Jan. 2022
  Designed a web-based platform to manage hotel reservations.
  - Implemented CRUD operations on reservations, with a MySQL database backend ensuring data integrity.
  - Optimized database performance by utilizing indexing and primary keys.
- **Room Scheduling Application (Java Swing, SQLite)**:　Dec. 2021
  Created a scheduling application for educational institutions.
  - Built a user-friendly GUI with Java Swing, incorporating dropdowns, buttons, and tabs.
  - Integrated SQLite for data storage via JDBC, demonstrating database design and query execution.
  - Added advanced features like waitlisting to improve utility and user satisfaction.
  - Conducted user feedback sessions with faculty to refine application features.

SKILLS

- **Programming Languages**: C, C++, Java, Python, HTML, CSS, Javascript, PHP
- **Tools/ Frameworks**: git, Github, GDB, Flask, Vim, jinja2, LLamaIndex, Langchain
- **Other**: MySQL, Pinecone, API integration, LLM application, Linux