Gaurav Arora

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EDUCATION

Pennsylvania State University, State College, PA   **Aug 2023**

Bachelor of Science — Computer Science

PROJECTS

AI- Powered Chatbot (Python, Flask, HTML, CSS, JavaScript)   Sep 2023

Developed a AI- driven web-based chatbot application using the Llama-2 model from Meta served by Anyscale API, integrated within a Flask web framework. The chatbot provides real-time responses to user queries, enhancing user engagement and offering immediate information.

- Designed a responsive and user-friendly interface using HTML and CSS, ensuring a seamless experience.
- Integrated the Llama-2 model for real-time chat responses, enhancing the utility of the application.
- Implemented error handling and feedback mechanisms, ensuring the user is informed during any API or system issues.

Pennsylvania State University, State College, PA
Storage System for Cryptocurrency (C language)   May 2023

The project involves implementing a secure and efficient storage system for a cryptocurrency startup using 16 military-grade hard disks configured as JBOD (Just a Bunch of Disks).

- Implemented a module to handle JBOD operations, encoding commands, translating addresses, and seeking blocks and disks. -
- Designed and developed a caching system to minimize disk access time, featuring dynamic allocation, cache lookup, and cache creation and destruction functionality.
- Created network communication functions for reading and writing data to a server, facilitating remote manipulation of JBOD systems.

Hotel Management Web Application (MySQL, PHP, HTML)   Jan 2022

Developed a web-based interface for hotel reservations management.

- Integrated functionalities for real-time reservation CRUD operations within a MySQL database.
- Implemented robust database practices, including the use of primary keys, to maintain data integrity and ensure consistent record management.

Room Scheduling application (Java Swing, SQLite)   Dec 2021

Developed a Room Scheduling application using Java Swing and object-oriented design principles. to facilitate the reservation of rooms in an educational institution. The application integrates with SQLite for backend storage.

- Developed a GUI using Java Swing, incorporating elements like dropdown lists, buttons, labels, and tabs.
- Integrated SQLite as a backend database using JDBC, showcasing database design and SQL query skills.
- Implemented features like waitlisting, showcasing problem-solving and user-experience considerations.
- Collaborated with potential end-users (faculty) to gather requirements and feedback.

SKILLS

C, C++, Java, Python, HTML, CSS, MySQL, PHP, GDB, DBMS, git, GitHub, JavaScript, Flask, API integration, LLM application, Linux, Vim

LEADERSHIP

Global Lion Mentor (Penn State)

- Mentored first-year international students in foundational computer science concepts, with a focus on "Introduction to Programming Techniques" using C++.
- Designed and facilitated hands-on coding workshops, covering topics such as data   structures, algorithms, and object-oriented programming.
- Utilized modern development tools, including IDEs like Visual Studio and version control systems like Git, to provide students with industry-relevant experiences.
- Fostered a supportive learning environment by encouraging collaborative problem-solving and peer code reviews.