

# Gaurav Arora

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## EDUCATION

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**Pennsylvania State University**, State College, PA, USA

**Aug 2023**

Bachelor of Science — Computer Science

## PROJECTS

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**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

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**Programing languages:** C, C++, Java, Python, HTML, CSS, Javascript, PHP

**Database:** MySQL, DBMS

**Tools/ Frameworks:** git, Github, GDB, Flask, Vim

**Other:** API integration, LLM application, Linux

## LEADERSHIP

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**Global Lion Mentor (Penn State)**

- Mentored first-year international students in foundational computer science concepts, using C++ and Java.
- 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.