

Prasanga Aryal

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PROJECTS

PrasBot: Interactive AI Bot

- Built and designed a real-time AI chatbot using React, integrated with Google Gemini API for advanced natural language processing.
- Implemented a secure backend with Node.js to ensure confidentiality of API keys.
- Optimized response time using React hooks and state management, reducing latency by 20% and improving user experience.

Red|Black: A Strategic Card Game

- Developed a browser-based card game using HTML, CSS, and JavaScript, leveraging external APIs for deck management and game flow.
- Implemented Semantic UI to create a responsive and intuitive user interface.
- Implemented advanced probability logic with Math.js to provide players real-time game insights.

CardCount: Real-time Blackjack Game

- Developed an interactive Blackjack game in React that integrates external APIs for managing game state.
- Implemented dynamic counters for tracking remaining face cards, aces, and player scores, enhancing the player's strategic decision-making.
- Utilized modular components to ensure scalability and maintainability for future feature extensions.

ThreadChat: Multithreaded Chat Program

- Developed a multithreaded chat application in Python to enable seamless communication between clients using TCP/IP sockets across different ports.
- Utilized multithreading for concurrent message exchange, ensuring a lag-free, real-time experience with minimal latency.

WORK EXPERIENCE

MathExcel Undergraduate Teaching Assistant – University of Kentucky

January 2024 – April 2024

- Assisted instructors in creating an engaging and supportive learning environment for students in introductory mathematics courses.
- Provided one-on-one support, helping students grasp complex mathematical concepts.
- Orchestrated group sessions to actively engage students, integrating interactive learning strategies to enhance critical thinking and problem-solving skills.

EDUCATION

University of Kentucky - Lexington, Kentucky

Bachelor of Science in Computer Science

August 2023- December 2025

Cumulative GPA: 3.94

- Relevant Courses: Artificial Intelligence, Computer Networking, Deep Learning, Generative AI, Web Programming, Data Structures, Algorithm Design and Analysis, Systems Programming, Graphics and Multimedia, Discrete Mathematics

Bluegrass Community and Technical College – Lexington, Kentucky

Associate of Science

January 2022- May 2023

Cumulative GPA: 4.0

- Organizations/Honors: Phi Theta Kappa Honor Society, Science to Success Scholar, Dean's List

SKILLS

Programming: Python, C, C++, Java, JavaScript, R

Web Development: React, HTML, CSS, JavaScript, PHP, JQuery, RESTful APIs

Tools & Frameworks: Git, Linux, Tkinter, Pandas, NumPy, MATLAB

Soft Skills: Leadership, Teamwork, Communication, Adaptability