Aditya Singh Kshatri

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EDUCATION

Madan Mohan Malaviya University of Technology Gorakhpur, UP 2024 – 28
B.Tech Information Technology CGPA 7.1

EXPERIENCE

Coders and Developers Club MMMUT Gorakhpur
Executive Member April 2025 – Present
- Co-organized and hosted multiple Competitive Programming and Web Designing events , workshops and club initiatives.
- Led backend development of the official club website, designing REST APIs and structuring Database architecture for scalable event and user management.
- Worked in a large development team using Git-based workflows to ship production features and deploy the platform on cloud.

PROJECTS

Small Redis in C | GitHub
- C, Sockets, Epoll syscalls, Data Structures
- Built a lightweight Redis-inspired in-memory database supporting concurrent clients using non-blocking sockets and epoll.
- Implemented custom data structures and request parsing to efficiently handle multiple client connections.

CDC Website | Live
- MongoDB, Express, Node, React, Cloudinary, Firebase
- Built and deployed the official Coders and Developers Club platform with REST based backend and dynamic frontend.
- Implemented JWT-based authentication and input validation to mitigate common vulnerabilities
- Optimized backend APIs and database queries for scalable request handling.

Neural Network in C | GitHub
- C, Linear Algebra, Calculus
- Implemented feedforward neural network from scratch in C (200 LOC) including forward propagation, backpropagation, and manual gradient descent with no External Library
- Built matrix operations and gradient descent logic to understand low-level ML internals. trained the Model on custom dataset. achieving a accuracy of 85%

Kindred-Compass Platform | Live
- MongoDB, Express, React, Node.js
- Developed a full-stack application with authentication, dynamic content management, and RESTful backend services to provide well-being suggestions based on user Activity records and manual inputs
- Implemented rule-based recommendation logic based on user activity data to generate personalized health suggestions.

PingPong: 2D Game in C | GitHub
- **C, OpenGL**
- Built a real time 2D game in C using OpenGL, implementing custom rendering pipeline, collision detection algorithms, and frame-based motion control. Achieved stable 300 FPS rendering during local performance testing.

TECHNICAL SKILLS

Languages: C, C++, Python, JavaScript, Go
Backend: Node, Express, REST APIs, PostgreSQL, MongoDB
Concepts: Linux, OS, Networking , Process Memory
Graphics: OpenGL, Computer Graphics Fundamentals
Tools: Git, GitHub, AWS, Firebase, Cloudinary

INTERESTS

Web Development, Competitive Programming, Backend Development, Linux, Operating Systems, Art, Music