Sehar Ahmad

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Professional Summary

Full Stack Developer with a strong foundation in data structures and algorithms using C++, and practical experience in building scalable, secure web applications with modern technologies such as React, Node.js, MongoDB, Next.js and PostgreSQL. Adept at designing robust backend systems, integrating APIs, and deploying modern frontend interfaces. Passionate about solving complex real-world problems through clean, efficient code and delivering high-impact, enterprise-grade solutions.

Education

B.M.S. College of Engineering *Nov 2022 - Aug 2026*
Bachelor of Engineering in Information Science

- CGPA: 9.57/10.00
- **Coursework:** Data Structures and Algorithms, Object-Oriented Programming, Computer Networks, Operating Systems, Database Management Systems, Full Stack Development, Software Engineering

Projects

CollegeQuora *Link*

- Built a comprehensive Q&A platform for college students enabling peer-to-peer doubt resolution and academic collaboration.
- Implemented upvoting system, leaderboard system, and category-based question filtering, resulting in faster doubt resolution.
- Developed user authentication, profile management, and analytics dashboard tracking
- Tools Used: React.js, Tailwind, Node.js, MongoDB, Express.js, Gemini API

Second-Hand Car Price Prediction *Link*

- Engineered ML model for used car price prediction using regression algorithms (XGBoost, Gradient Boosting), optimizing data preprocessing, feature engineering, and outlier handling.
- Developed web application with interactive UI for price prediction and model visualization using Flask backend and Next.js frontend.
- Implemented comprehensive data analysis pipeline handling multiple car features including brand, model, year, mileage.
- Tools Used: Python, Scikit-learn, Pandas, XGBoost, Flask, Next.js

Tiny Encryption Algorithm (TEA) Web Tool *Link*

- Developed web-based implementation of Tiny Encryption Algorithm (TEA) for secure text encryption and decryption with interactive user interface.
- Built responsive frontend with real-time encryption/decryption functionality, key validation, and clear visualization of the TEA process.
- Designed intuitive step-by-step visualization of the TEA algorithm's 64 rounds, helping users understand the encryption process and block cipher mechanics.
- Tools Used: Next.js, Flask, Cryptographic Algorithms

Unix Shell Replica *Link*

- Built a custom UNIX Shell in C, extending core functionalities to deepen UNIX environment system programming expertise.
- Implemented essential shell features including command parsing, process management, file I/O redirection, and pipeline operations.
- Developed built-in commands (cd, pwd, history) and signal handling for robust user interaction and process control.
- Tools Used: C

Technical Skills

Languages: C++, C, Java, Python, SQL, JavaScript

Web Development:

- Frontend: HTML, CSS, React, Next.js
- Backend: Node.js, Express.js, Flask, REST APIs

Databases: MongoDB, PostreSQL

Networking: Wireshark, Cisco Packet Tracer, TCP/IP, OSI Model, Network Protocols, Subnetting

Other Tools: Github, VS Code, Google Colab, Jira, Jupyter Notebook

Certifications

Advanced Selenium Training, Infosys Springboard, Dec 2024

The Complete 2024 Web Development Bootcamp, Udemy, Sept 2024

Data Structures in C++, Coding Ninja, Jan 2024

Achievements

LeetCode: Peak Rating 1811 - Achieved Global Rank 228 out of 25,000+ participants in LeetCode Weekly Contest 451.

CodeChef: Peak Rating 1846 - Achieved Global Rank 232 in CodeChef Starters 185 Div 2.