Sammam Sohail

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Summary

I am a passionate Software Engineer with 2 years of experience in full-stack development, cloud platforms, and data-driven solutions. Skilled in SQL, JavaScript, and frameworks like ReactJS, NodeJS, and NextJS. I've contributed to projects ranging from blockchain DApps to AI systems, with experience in AWS, Azure, Docker, and CI/CD tools. I recently completed my MSc in Data Analytics at the National College of Ireland, where I focused on machine learning and big data techniques to solve real-world problems.

Skills

ReactJS · NextJS · Vanilla JS · NodeJS · Express · SQL · NoSQL · MySQL · PostgreSQL · MongoDB · Microsoft Azure · AWS · Git · CICD pipelines · NGINX · Agile Methodologies · JIRA · Shell Scripting · tailwindcss · Postman · HTML5 · CSS3 · Redux

Work Experience

Analog Mutations, Karachi, Pakistan

Software Engineer August 2021 – December 2023

- **Accelerated UI development by 40%** by implementing modular, reusable components using **ReactJS**, **NextJS**, and **Material-UI**, significantly reducing code duplication meanwhile preserving user experience leading to award winning frontend interfaces.
- **Improved state management efficiency by 60%** through the adoption of **Redux Toolkit**, streamlining data flow and minimizing frontend bugs across crypto wallet applications.
- **Enhanced DApp performance and user engagement** by integrating smart contracts via **Web3.js** and **Ethers.js**, enabling secure and real-time blockchain interactions
- **Boosted code reliability and maintainability** by developing wallet interfaces in **TypeScript**, reducing runtime errors and improving long-term scalability.
- **Reduced third-party API failure impact by 70%** by implementing advanced error-handling mechanisms, ensuring a seamless experience even during service outages.
- **Minimized frontend-backend integration time by 30%** through close collaboration with backend developers, aligning component logic with blockchain functionalities.
- **Improved security and user trust** by incorporating role-based access, validation layers, and secure endpoints within both frontend and backend modules.
- **Shortened webapp onboarding time by 50%** by designing intuitive UI/UX flows and ensuring smooth integration with wallet providers like MetaMask.
- **Increased deployment efficiency** by containerizing applications using **Docker** and deploying them on **AWS EC2** with **NGINX**, achieving consistent uptime and fast recovery.

Tech: ReactJS, Redux Toolkit, NextJS, JavaScript, Typescript, NodeJS, MongoDB, PostgreSQL, Docker, Git, Web3, Material UI, Ant Design, Azure, AWS, Postman

National University of Computer and Emerging Sciences, Karachi,

LAB Assistant September 2020 – May 2021

- **Mentored 60+ students** in core JavaScript and C++ labs, emphasizing practical coding skills and real-world problem-solving techniques.
- **Guided students in debugging and error resolution**, fostering critical thinking and independent troubleshooting skills.
- **Promoted industry-standard coding practices**, encouraging clean, maintainable, and efficient code for long-term success.
- **Evaluated assignments and projects rigorously**, providing detailed feedback to drive continuous improvement and technical growth.
- **Structured assignments** that simulated real-world development scenarios, preparing students for industry challenges.

Tech: JavaScript, Visual Studio Code, Python, GitHub, Google Colab

Academic Qualification

MSC	Data Analytics	National College of Ireland (First Class Honours)	2024-2025
BSC	Computer Science	National University of Computer and Emerging Sciences (GPA 3.31	2019-2023

Research Work / Projects

Decentra AI

- **Decentralized application that allows users to run custom scripts on GPU clusters using crypto tokens, optimizing execution costs and enhancing security via stepwise distributed processing.**
- **Designed and implemented the complete frontend** using **ReactJS**, **TypeScript**, and **Tailwind CSS**, ensuring a clean, responsive UI across devices and screen sizes.
- **Built highly reusable and dynamic UI components** (tables, modals, cards, alerts) that significantly accelerated development speed and improved code maintainability.

- **Optimized user experience** by implementing **responsive design principles**, ensuring seamless performance across desktops, tablets, and mobile devices.
- **Enhanced component performance** using memoization and lazy loading strategies to reduce initial load time and improve rendering efficiency.
- **Integrated Web3 features and 3rd party APIs** to enable wallet connectivity and smart contract interaction with real-time status feedback and error handling.
- **Project awarded by SOLUS Labs for Best UI/UX Implementation**, recognized for delivering a polished, intuitive, and developer-friendly interface that simplified complex blockchain interactions.

SAHAL WALLET

- **Developed a Web3-enabled crypto wallet interface** using **pure Vanilla JavaScript**, supporting core features like **Buy, Swap, Exchange**, along with extended services such as **gift card purchases** and **mobile top-ups**.
- **Built a fully custom frontend architecture** with a custom bundler and modular utility functions, ensuring lightweight performance and **high component reusability** across the app.
- **Crafted dynamic, responsive UI components** from scratch—buttons, modals, loaders, and tabs—without reliance on any third-party libraries, focusing on performance and flexibility.
- **Optimized codebase for performance and scalability**, applying event delegation and DOM diffing techniques to manage complex UI updates efficiently.
- **Focused on clean UX flows**, including real-time transaction feedback, error handling, and confirmation modals to guide users through Web3 interactions.

Online Exam Proctoring System

- **Developed a full-stack proctoring web application** to ensure secure and intelligent online examination monitoring.
- **Built the frontend** using **ReactJS**, **Material UI**, and **Redux Toolkit**, delivering an intuitive and responsive user experience.
- **Implemented backend services with NodeJS** and **MySQL**, managing user authentication (JWT), exam sessions, and secure data storage.
- **Designed and deployed a dedicated AI microservice** using **TensorFlow** and **OpenCV** to perform **facial recognition, gaze detection, and object detection** independently from the main application for enhanced scalability and performance.
- **Modular architecture enabled scalability**, better error handling, and easier maintenance of both the frontend and backend systems.
- Collaborated with academic stakeholders to align features with institutional exam security requirements.

Achievements

Gold Medal, Orlando, Kennedy Space Center
Robotics Programming July 2016

- **Won 1st place in an international robotics competition** hosted by NASA's Kennedy Space Center, outperforming 11 participating teams.
- **Programmed an Arduino Uno in C++** to build a fast and accurate **line-following robot**, showcasing real-time sensor calibration and control logic.
- **Successfully programmed and navigated a pre-set autonomous robot**, demonstrating adaptive problem-solving skills.
- **Remotely piloted an FPV robot** across a simulated **Mars terrain model**, emphasizing precision control and spatial awareness in robotics systems.

Dean's List of Honours, Karachi, FAST NUCES
High Achiever May 2021

- Awarded with Dean's List Award for scoring 3.67 SGPA in spring 2023 semester.

Dean's List of Honours, Karachi, FAST NUCES
High Achiever May 2023

- Awarded with Dean's List for scoring 3.56 SGPA in spring 2021 semester.