Khawaja Ammar

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Education

LUMS Lahore, PK

B.S Computer Science; GPA: 3.28 *2016 – 2020*

Relevant Courses: Distributed Systems, Software Engineering, Advanced Programming, HCI (UI/UX), Data Structures, Algorithms, Network-Centric Programming, Network Security

Experience

Fullstack Software Engineer (Javascript) Sep 2020 – July 2023

Quality Group

- Part of the core team responsible for engineering and developing the express.js (node.js) server meant to replace the legacy Oracle server for management and planning of the company's internal operations
- Developed the system in modules ensuring the original SQL database and new REST API calls work as intended, including making most of the controllers and models in node.js
- Remodeled the schema of the SQL DB to 4NF and updated the queries in the codebase resulting in 1.5X performance boost
- Designed standardized UI/UX using React for system's frontend after extensive Usability testing
- Designed tests for Frontend, API calls and DB using Jest.js for 100% E2E coverage

Computer Science Teaching Assistant Aug 2018 – Dec 2019

LUMS University

- Engineered CMS website for university society using MERN stack for event planning and management
- Taught beginner and intermediate level CS courses to students in C++
- Conducted Labs, tests and office hours

Projects

Chatting App | *MERN Stack, Socket.IO, JWT Auth, REST API* Mar 2023 – June 2023

- Developed a full-stack web application using express.js serving REST APIs with React and tailwindcss + daisyUI as the frontend
- Authorization and authentication done using JSON web tokens (JWT) for secure sessions
- Implemented Real-time communication between clients using Socket.IO (including message indicators)
- Client information and messages stored in MongoDB instance for faster reads

Peer-to-peer file sharing | *Python, sockets* Dec 2019 – Mar 2020

- Engineered a Chord-like p2p node for sharing files with other nodes on request
- Implemented Finger tables for O(log N) lookup time
- "Stabilization" stage and file redundancy implemented to minimize risk of file loss

Technical Skills

Languages: Javascript/Typescript, Python, Golang, C/C++, SQL (Postgres/MySQL), HTML/CSS
Frameworks: React.js, Node.js, Next.js, Express.js, Jest.js, Astro
Developer Tools: Git, Linux, SSH, VS Code, neovim, Obsidian
Libraries: TailwindCSS, Socket.IO, JWT