Mohammed Sebbagh Software Engineer

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TECHNICAL SKILLS

TypeScript · JavaScript (ES6+) · Python · React.js · Redux· Next.js ·Node.js · Express.js · RESTful APIs · Deno · Fresh . Preact · Oak · NoSQL (MongoDB) ·SQL (PostgreSQL) · Deno Websockets · Chart JS · D3 · CSS3 ·Tailwind CSS ·Bootstrap · Material UI · HTML5 · Git · Webpack · GraphQL · Vite · Wordpress ·OAuth ·TDD (Jest/Puppeteer/Enzyme/SuperTest) · Docker · AWS · TravisCI

EXPERIENCE

Software Engineer | OSLabs, New York NY **December 2020 - Present**

- An open source memory tool for tracking potential memory leaks, and displaying real-time memory statistics in easy-to-read charts.
- Leveraged React Fresh's just-in-time rendering and the component island pattern to optimize client-side rendering, reducing page load time by >50% , while still allowing for server-side rendering and a highly resilient application.
- Utilized Preact to develop a lightweight, browser-based application with fast rendering, efficient memory usage (less than 3MB of memory consumption) and compatibility with React's API to rapidly build and deploy the application with no build tools required.
- Developed a Deno and Oak server to efficiently mine and transmit memory data via Websocket connection, handling up to 1000 connections without degradation in performance while maintaining optimal CPU and memory usage for reliable operation.
- Implemented Deno's standard Websockets API to establish and maintain persistent client-server communication in a memory mining and transmission application, allowing for efficient and reliable data transfer between the server and clients.
- Created an interactive, real-time chart using Chart.js to visualize heap memory data over time. Improving data analysis to quickly identify memory usage trends and prevent memory leaks, resulting in more efficient resource management and reduced downtime.
- Engineered cross-platform compatibility Denosoar CLI with start/stop recording frequency adjustments,, beta load testing tool, and created a help command to provide users with instructions for all available CLI commands improving efficiency and flexibility.
- Enforced TypeScript's type checking to catch errors early in the development process, resulting in a more stable and maintainable codebase. This approach helped increase the efficiency of the code review process by >30% and reduced debugging time by >20%.

Junior Fullstack Engineer | Valley Health System, NJ **April 2019 - October 2020**

- Developed and maintained user-friendly web applications using the MERN stack, including building responsive UI components with React.js and implementing server-side logic with Node.js and Express.js.
- Collaborated closely with cross-functional teams to translate business requirements into functional software solutions, ensuring seamless integration between front-end and back-end systems.
- Assisted in the design and implementation of RESTful APIs, enabling efficient data retrieval and manipulation while adhering to industry best practices and security standards.
- Participated in code reviews and contributed to ongoing code refactoring and optimization efforts, enhancing application performance, maintainability, and scalability.

OPEN SOURCE PROJECTS:

Travel Packing App | an application designed to help travelers pack and manage their trip **2022 - 2023**

- Applied the React framework Next.js to take advantage of server-side component rendering and dynamic easy to configure routing and navigation paths, thus providing the user faster load times and better overall user experience
- Architected a GraphQL backend using Apollo Server to leverage GQL's query language syntax to handle frontend queries by employing strongly typed schema definitions to respond to queries with only the requested data

GameBetter | Online game board to improve cognitive functionGameBetter **2021 - 2022**

- Built a highly efficient Postgres database schema and queries, incorporating security measures and disaster recovery planning, resulting in improved query performance, resource utilization, and data integrity.
- Constructed a robust encrypted user login and registration flow using Bcrypt with server-side verification to authenticate users and persist login with HTTP-secure cookies and sessions using Express.
- Collaborated with cross-functional teams to troubleshoot and resolve complex Node.js issues in production environments.
- Documented debugging processes and best practices to share with the development team and improve overall code quality.

SMART GOAL App | Designed for high school teachers to create S.M.A.R.T Goals for their classes **2020 - 2021**

- Used React to create a responsive single page application with modular and scalable code by utilizing reusable components and react Hooks, and improving application performance and maintainability through state management and context API.
- Designed and built a Node.js/Express RESTful API to handle HTTP requests to various endpoints, based on the middleware design pattern, routers and controllers to facilitate the request-response cycle and connect client side to database.
- Optimized Webpack configuration by implementing code splitting, minification, and uglification techniques to improve the application's load time and overall performance, resulting in a faster and more seamless experience for the end user.
- Implemented a non-relational database to store user data in a BSON document with full CRUD functionality for flexible document schema that allows fast queries, and frequent application change.

EDUCATION

New Jersey Institute Of Technology, Newark, NJ | B.S, Applied Physics –Optical Science and Engineering **2017**

PUBLIC TECH TALKS (Sponsored)

Deno | Speaker @ Jeeny and Bractlet Software Engineer Speaker Series **2022**

- Spoke on the advantages of Deno over Node.js, including its convenience for TypeScript projects, and demonstrated how Deno solves existing inconveniences in Node.js projects.