Kósa Mátyás

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EDUCATION

Babeș-Bolyai University

Computer science

National High School "Silvania"

Mathematics and Computer Science

Cluj-Napoca, Cluj, RO

Oct. 2022 - present

Zalau, Salaj, RO

Sept. 2019 - Jun. 2022

TECHNICAL SKILLS

Languages: Java, C/C++, Python, C#, Javascript/Typescript, SQL, Matlab Developer Tools: Git, Linux, Shell, Docker, VSCode, Gitlab CI, Github Actions

Databases: MySQL, PostgreSQL, MSSQL, MongoDB, MariaDB

Frameworks: ReactJS, NextJS, NodeJS, TailwindCSS, PyTorch, Spring, .NET, Flask, Express.js, BabylonJS, Swing

Deployment: Microsoft Azure, Vercel

Workflows: Agile, Scrum

Work Experience

Full-stack Engineer Intern

Aug. 2024 – Oct. 2024

Hostix remote

- Developed a secure **3D** scan-sharing service using the **MERN** stack (**MongoDB**, **Express**, **React**, **Node.js**) and handled scans up to 30MB.
- Built 3D jaw scan rendering with **React** and **Babylon.js**, enabling interactive patient data analysis.
- Implemented JWT-based authentication for secure access and browser caching, reducing scan load times by 40%.
- Deployed backend on **Azure** and frontend on **Vercel** for improved scalability and performance.

Personal Projects

SQUEAL | Java, MongoDB | github.com/SQUEAL

Feb. 2024 - Jun. 2024

- Developed a **Java**-based DBMS with a **MongoDB** backend, featuring a visual interface for seamless database management, including CRUD operations and SQL-like queries.
- Implemented essential features such as database/table creation, data insertion and deletion, and optimized query functions (filtering, grouping, joins) with custom indexing for performance.
- Built an interactive GUI with **Java Swing** and implemented **socket programming** for multi-client support, allowing concurrent client-server interactions.

Carbazaar | NodeJS, Tailwind, PostgreSQL, Express | github.com/CarBazaar

Feb. 2024 – Jul. 2024

- Developed a robust platform for creating, viewing, and managing used car advertisements, utilizing **Node.js** with **PostgreSQL** for data handling and **Tailwind CSS** for a responsive, user-friendly interface.
- Designed and implemented **REST APIs** to handle core functionalities such as advertisement creation, updating, and deletion, enabling seamless interaction between the frontend and backend.
- Built secure **JWT-based authentication** for login, sign-up, and authorization, with features like ad likes, cart functionality, offer placements, and admin controls. Integrated a real-time **messaging system** with **web sockets** to facilitate buyer-seller communication.

Typing Speed Test | HTML, CSS, JavaScript | github.com/typingSpeedGame

Jan. 2024 – Feb. 2024

- Built an interactive Typing Speed Test web application that leverages a public API to fetch random quotes for typing practice, providing diverse content for each session.
- Implemented real-time tracking of typing performance, displaying words per minute (WPM) and accuracy to help users track their progress.
- Developed a responsive, user-friendly interface using **HTML**, **CSS**, and **JavaScript**, and deployed the app on GitHub Pages for public access.

Languages

English: C1 Cambridge Certificate, **Romanian**: Professional proficiency, **German**: Basic proficiency, **Hungarian**: Native proficiency