Hunor Mészáros

SOFTWARE ENGINEER
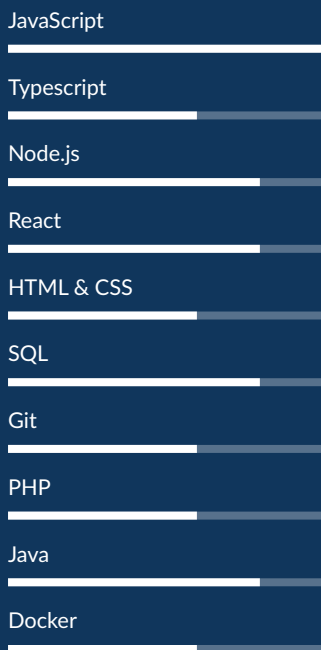
Details

Joseni, 537130
Romania
+40 744 163 414
hunor@hunz.io

Links

Portfolio
LinkedIn
GitHub
Stackoverflow

Skills

JavaScript

Typescript

Node.js

React

HTML & CSS

SQL

Git

PHP

Java

Docker

Languages

Hungarian

English

Romanian

Profile

Software engineer with 8+ years of professional work experience who worked on a wide range of software projects over the years. Avid learner who can easily adapt to new programming languages and technologies. Advocate of the Clean Architecture by Robert C. Martin.

Employment History

Software Engineer, Freelancer

JUNE 2021 – PRESENT

Responsible for the architecture and implementation of a Google Home compatible smart home system (backend and frontend) (using **Docker**, **Typescript**, **TypeORM**, **Node.js, Express.js**, **Socket.io**).

- Collaborated with the hardware developer to implement realtime communication (using **MQTT**) between the ESP32-based devices and the backend service.
- Developed a mobile-friendly, web-based application (using **React**, **Redux Toolkit**, **React Router**, **Material UI**, **Socket.io**) for device control and management. Implemented an administrative user interface with live device log viewer and device OTA (over-the-air) software update manager.
- Built a complementary authentication and authorization (OAuth2) service (using **Docker**, **ORY Hydra**, **ORY Kratos**) with custom server-side rendered React UI for login, register, consent, etc. pages.
- Integrated the Google Smart Home platform into the system (using **Google Smart Home API**, **OAuth2**) to allow users to control and query their devices with Google Assistant.

Designed and developed a web-based digital business card application (using **Typescript**, **MySQL**, **Express.js**, **Firebase Authentication**, **React**) for a client who makes handcrafted leather wallets with built-in NFC tags.

- Implemented the necessary backend and frontend to let users create an account, claim a wallet by the NFC tag id, upload an optimized profile picture, edit contact information and social profiles, etc.

Software Engineer, Navigator Software, Targu Mures

JUNE 2017 – JUNE 2021

Participated in researching, designing and developing a large cloud-based **IoT** platform built on microservice architecture.

- Implemented some of the core backend services of that system (using **Docker**, **PostgreSQL**, **InfluxDB**, **Node.js**, **Express.js**, **JWT**, **MQTT**, **Socket.io**), like the Account Management System responsible for user authentication, authorization, **2FA**, etc., the Device Management System responsible for device registration, management, sharing, etc., the MQTT Broker responsible for handling device connections, the Data Bridge responsible for validating and pre-processing sensor data, routing data to the relevant services, etc.
- Was tasked to maintain and upgrade a **Node-RED** based event-driven, low-code programming service. Developed 15+ custom components (called "nodes" in a Node-RED environment) (using **Node.js**, **Node-RED**, **HTML**, **CSS**, **JavaScript**) to extend the service with new functionality like **AccuWeather** integration, instant messaging, sensor data read events, device command execution, virtual sensors, etc.

- Developed a custom high-throughput cloud function service (similar to Firebase Functions) (using **Docker**, **PostgreSQL**, **Redis**, **Node.js**, **Express.js**) which is used heavily by many of the services and applications developed by the company.

Integrated a face recognition device, developed the necessary backend system (using **WebSocket**, **PostgreSQL**, **Node.js**) to connect it to a proprietary attendance tracking solution.

Responsible for the installation and maintenance of **Linux**-based servers and the deployments of the software products developed by the team.

Mentored interns and co-workers in **Android**, **SQL**, **Git**, **JavaScript**, **Node.js**, **Docker**.

Developed an internal chat system (using **Couchbase**, **Node.js**, **Feathers.js-**, **Polymer**).

Android Developer, Navigator Software, Targu Mures
JULY 2014 — JUNE 2017

Designed and developed the **Android** version of the company's main **ERP** (Enterprise Resource Planning) system, with 25+ distinct modules, serving enterprise clients from a range of industries and domains like the catering industry, forestry, gas stations, bakeries, warehouses, factories, etc.

Implemented a data synchronization backend system in **PHP** to sync data between the Android application and the central **PostgreSQL** database.

Integrated into the application a wide range of industry grade physical devices, like **Bluetooth**-enabled thermal printers, cash registers, **RFID** readers, etc.

Worked directly with some of the clients to better understand their needs and to implement custom-tailored solutions.

Education

BE, Sapientia EMTE, Targu Mures
SEPTEMBER 2010 — JULY 2014

Bachelor of Engineering in Computer Science

High School, Salamon Ernő, Gheorgheni
SEPTEMBER 2006 — JUNE 2010

Mathematics-Informatics class