Ceyhun Şen

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Work Experience

Chainway Labs
chainway.xyz | Istanbul/Türkiye

Software Engineer *03/2024 - 09/2025*

- Worked on implementing a state-of-the-art Bitcoin bridge in Rust, called Clementine.
  - Implemented RPC interface using gRPC and protobuf. Used PostgreSQL for database operations. Prepared Docker image and configured CI/CD steps. Implemented various syncing logic for Bitcoin-related data. Added unit and integration tests for the protocol.
  - Wrote a CLI application in Rust for clients that interacted with the protocol using public APIs.
  - Developed a mock Bitcoin RPC library in Rust for testing the protocol.
- Wrote a RISC-V assembly to BitVM virtual machine transpiler in Rust.

Inventron Electronics And Software
inventron.com.tr | Istanbul/Türkiye

Embedded Software Engineer *09/2023 - 03/2024*

- Took part in developing a custom U-Boot bootloader for a brand-new RISC-V based CPU.
- Maintained and added new features to the custom Yocto BSP for in-house NXP i.MX based SOMs.

Part-time Embedded Software Engineer *02/2023 - 08/2023*

- Wrote Linux kernel drivers for various sensors using SPI and I2C interfaces. Wrote user-space applications that reads those sensor data from the kernel.
- Modified NXP i.MX CPU Linux kernel drivers to achieve real-time requirements requested by customers.
- Ported new AOSP versions for the in-house NXP i.MX based SOMs.

Embedded Software Intern *08/2022 - 01/2023*

- Made an IOT project using ESP8286 and C++ that collected sensor data and communicated with the internet. Wrote a mobile application using React Native that controlled the embedded system over the internet.
- Wrote a test tool in C for the custom SOMs which are designed in-house that tested various peripherals and reported the end results.
- Prepared graphical UIs using Qt to showcase SOM capabilities at fairs.

Enterans
Bursa/Türkiye

Part-time Embedded Software Engineer *03/2022 - 06/2022*

- Worked on writing platform-independent peripheral drivers for various microcontrollers in C.

Education

Bursa Technical University *Computer Engineering* — *btu.edu.tr/en | 08/2019 - 08/2023*
Haydarpaşa High School — *haydarpasalisesi.meb.k12.tr | 09/2015 - 06/2019*
Middle School Mathematical Olympiads — *Istanbul/Türkiye | 09/2012 - 06/2014*

Projects

ATmega328P HAL Driver *github.com/ceyhunsen/ATmega328P-HAL-Driver*

Hardware abstraction layer driver for the ATMega328P microcontroller. Written in C. Includes documentation, unit and integration tests. Includes a mock hardware interface for testing that can act like real hardware.

Personal Website *github.com/ceyhunsen/personal-website*

My static personal website, written and designed from scratch using Next.js and vanilla CSS. Supports categorized post pages and features compile time optimizations. Has CI/CD pipeline which builds and deploys the website automatically while compiling my resume in the process.

MPU-925X Sensor Driver *github.com/ceyhunsen/mpu925x-driver*

Platform independent sensor driver for the MPU-9250 and MPU-9255 IMU sensors. Written in C. Includes documentation, unit and integration tests. Includes a mock hardware interface for testing that can act like real hardware.

BMP180 STM32 Sensor Driver *github.com/ceyhunsen/bmp180-stm32-driver*

Sensor driver specifically targeting STM32 microcontrollers using STM32 HAL drivers. Written in C.

Skills

- **Languages:** Turkish (*Native*), English (*Professional working proficiency*)
- **Programming Languages:** C, Rust, Bash, C++, JavaScript
- **Tech Stack and Frameworks:** Linux driver stack, Next.js, React Native, Rust Tokio async, U-Boot driver model, Bitcoin, Git, Makefile/CMake

This document is created/updated at September 14, 2025.