Wojciech Graj

Software Developer

The Netherlands
+31 6 20635152
me@w-graj.net
w-graj.net
wojciech-graj

A software developer specializing in embedded systems, experienced with kernel- and user-space linux, Rust, and C. Passionate about solving low-level challenges, optimizing performance, and bridging hardware and software.

Work Experience

Sep 2023– **Software Developer**, *P-X Systems*
At P-X Systems, I am responsible for writing software in **Rust** for **embedded linux**, while also handling the technical side of integrations with third-parties, and contributing to our server-side software.
- Created a **dockerized build system** for **embedded linux** and **uboot**, and set up **continuous integration** pipelines.
- Integrated with **Microsoft Azure** by writing a custom log ingestion client in **python**, creating interactive data visualizations, and automating ARM template creation.
- Added multiple **C++**-based open-source packages to **Buildroot**, and extensively patched them to suit our needs and resource constraints.
- Optimized a proprietary radio-based networking protocol, drastically increasing throughput and reliability.
- Worked in a team that completely changed our database schema and wrote **SQL** queries to model a new complex workflow.
- Discovered and addressed several hardware and firmware bugs, including a critical bug in a major vendor's firmware.

Mar-Jun 2024 **Software Developer**, *TU Delft Software Project for a Dutch company*
Created a system for rapid automatic provisioning of embedded devices, with a focus on the process' security. The solution was reviewed positively by the both the client's cryptography expert and key stakeholders.

Jul-Sep 2021 **Intern**, *StayInFront Digital*
Created a simple network-based distributed computing system in **python** to automate neural network training.

Education

2022– **BSc. Computer Science and Engineering**, *Delft University of Technology*
GPA: 8.6/10 (expected)
(Embedded) systems variant.

Personal Projects

Open-Source Contributions
Contributed to open-source **Rust** crates, including time, yara-rust, and bitstream-io.

Open-Source Software
Created open-source software, with the following highlights:
- bin-proto: A **Rust** crate for bit-level encoding and decoding of structured binary protocols.
- Numerous source ports of DooM, with the main technical challenge being interoperability between **C** and languages such as **python**, **C#**, or **VBA**.
- LiDAR-Dungeon: A game for the 7DRL 2023 game jam in **Lua**, that was featured as the *Game jam entry of the month* in the April 2023 Edition of the GitHub GameBytes Blog
- OrbVis: A tool to visualize satellites orbiting Earth in realtime in **C** with **OpenGL** and **GTK+3**, published as a **FlatPak** package and compiled for both Linux and Windows.
- TermGL: A **C** library with **python** bindings for rendering 2D and 3D graphics using text in a terminal, with support for shaders, 24 bit RGB, and keyboard and mouse input.

Awards

2021 **Icculus Microgrant**
Awarded the Icculus microgrant for the TermGL library.