



At Hitachi Energy our purpose is advancing a sustainable energy future for all. We bring power to our homes, schools, hospitals and factories. Join us and work with fantastic people, while learning and developing yourself on projects that have a real impact to our communities and society. Bring your passion, bring your energy, and be part of a global team that appreciates a simple truth: Diversity + Collaboration = Great Innovation

WebAssembly (Wasm) is a virtualization technology that lets you run code written in C, C++, Rust, Zig, Go directly in a browser. Similar to Java VM or .NET, it relies on a simple, stack based intermediate language, which is then executed by the host runtime. Despite its name, WebAssembly is not intended only for browsers, but there exist several host runtimes, so called embedders, which enable you to run the same code "anywhere", incl. devices like Raspberry Pis. While the software for real-time embedded systems is still often tailored to specific target hardware hosts, flexibility and dynamic function allocation has become more and more important also for IoT and automation systems. WebAssembly's benefits over VMs and containers (more lightweight and secure) make it a promising candidate technology for such next generation embedded systems.

This project shall investigate the feasibility of WebAssembly for IoT and automation scenarios. In particular, it shall evaluate the real-time capabilities of WebAssembly.

Our flexible work practices help you optimize personal and business performance while creating an environment where all employees can develop their skills and grow.

Your responsibilities

- Acquire knowledge, survey and summarize literature on related technologies (WebAssembly)
- Design, implement, and execute experiments on real-time performance
- Report on your work, including presentation and interpretation of results
- Contribute to a scientific publication

Your background

Currently pursuing a MSc degree in the area of Software Engineering, Computer

Experience with one or more of the following programming languages: C, C++, Rust, Go. Experience with WebAssembly, Real-time systems, Docker containers a plus

Interest in software systems, independent working, curiosity, English

More about us

Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all. We serve customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, we pioneer technologies and enable the digital transformation required to accelerate the energy transition towards a carbon-neutral future. We are advancing the world's energy system to become more sustainable, flexible and secure whilst balancing social, environmental and economic value. Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries. Headquartered in Switzerland, we employ around 38,000 people in 90 countries and generate business volumes of approximately \$10 billion USD. www.hitachienergy.com

Interested in joining our team? If so, we look forward to receiving your full application (motivation letter, CV, references) only via our online careers tool.

Hitachi Energy Switzerland Ltd.

Sonia Canelada Granizo

Talent Acquisition

Location	Baden-Dättwil,Aargau,Switzerland
Business Unit	Business Function Technology
Publication Start Date	03.06.2022
Job Function	Research and Development
Publication ID	CH53256553_E1