Software Engineering internship @ factry Tengo Modules

With open IIoT solutions for industrial data collection and manufacturing execution (MES), Factry software empowers anyone to radically improve operations, from operator to plant manager.

Who we are

Factry's mission is to radically simplify the process of learning from industrial data, to unlock the full potential of people and processes. We keep it easy on the buzzwords, and like a down-to-earth and first-things-first approach.

With industry-proven solutions for data collection and data integration, we help companies bring clarity to the shop floor and beyond, facilitate reporting and run their operations with less downtime, costs and waste.

Back in 2016, we aimed to bring an open data culture to the world of process manufacturing. Today, our highly accessible IIoT solutions are running in plants across 5 continents, going from niche SMEs to multinationals.

About our product

Factry Historian is a powerful and easy-to-use data management platform for collecting, storing and visualizing industrial process data. Our historian software enables businesses to transform raw production data into actionable visual insights, drastically reduce downtime, avoid costs and drive a better overall plant performance.

Next to raw data collection and visualization, we are currently expanding the platform with an event detection framework, allowing users to derive discrete events from the incoming raw data streams and add extra context to these events, opening up a whole new data set for further analytics.

The internship: Tengo Module(s)

Factry Historian uses the open-source Tengo¹ scripting language in its calculations engine. Although Tengo comes with a standard set of functions, it is lacking functionality that is typical for the process industry such as Statistical Process Control functions (e.g CP, CPK) and Steam Functions (IF97 Steam/Water Properties).

¹ https://github.com/d5/tengo

The main focus of this internship is to develop a Tengo package for either SPC or Steam Functions (or both, time permitting) that can be imported into Factry Historian for use. This means:

- Developing an understanding of Tengo and its use in Factry Historian.
- Scoping the required functionality together with the Factry Historian development team.
- Performing the development of the module(s) in Tengo.
- Demonstrating the functionality of the newly developed Tengo module(s) in Factry Historian using demo data.

Next to this technical implementation, everything is unit-tested (where possible) and well-documented.

What we offer you

During the internship, you will be a full member of our Historian product development SCRUM team. You will:

- Attend the daily standups, sprint review and sprint planning meetings
- Have the ability to work independently and together in our team
- Learn technical skills from our experienced developers
- Have a dedicated internship coach to assist you during your internship

Our technology stack

These are the main technologies used at Factry, most of which you will also encounter during the internship:

OS: Linux (Ubuntu) Programming languages: Go, Javascript Databases: InfluxDB, PostgreSQL UI Frameworks: Svelte (JS), Bulma (CSS) Version Control / CI: GitLab