Rikard Hallberg

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Summary

Cross-functional full-stack developer with a strong focus on delivering functionality to the end customer and meeting both culture and process standards within companies.

Experience

ABB – Research Associate Engineer | Python, C++, Matlab, Simulink jul. 2024 – oct. 2024

- Improved the Python algorithm to evaluate dataset sufficiency and quality before ML application. Processed datasets with 10M+ data points across 6 powertrain sensor features. Defined ML applicability criteria considering data and concept drift. Built a case study-style Jupyter Notebook template for generating statistical reports and visualizations.
- Enhanced previous embedded C++ software to monitor and log ML training set performance in real time.
- Prototyped a Simulink-based powertrain model to test the C++ implementation in a simulated environment. Created automated test cases to benchmark correctness of embedded implementation.

ABB – Research Intern Engineer | Python, C++ jul. 2024 – oct. 2024

- Developed real-time embedded software in C++ for next generation drive platforms. Compared baseline “healthy” powertrain states to live operating data using non-parametric distribution analysis.
- Designed a cloud-based Python algorithm to analyze powertrain field data and classify operational states.
- Used one powertrain’s data to train a Feedforward Neural Network and applied the Python algorithm pre-training. Achieved only a ~3.7% drop in prediction accuracy while improving training time by over 20%.

Klardeal - Full stack Developer (Freelance) | TypeScript, SQL, HTML, CSS oct. 2023 – dec. 2023

- Delivered a deal-matching platform in <2 months, acquiring 25 paying customers during my contract.

Project course (Westermo) – Software Developer | Vue.js, Docker, SQL nov. 2021 – jan. 2022

- Built risk integration software as a web app with a team of 6; primarily led frontend development.

Thesis Project with applied NLP (Mälardalens University) nov. 2021 – jan. 2022

- Applied Natural Language Processing to over 50 documents with over 600 security requirements to find the most common problems in language clarity.

Education

Mälardalen University, completed Feb 2023 Västerås, Västmanland

Bachelors in Computer Science

- Software engineering, Data structures & Algorithms, Computer Architecture, Linux, Networking, etc.

Skills

- C++, Python
- SQL
- Git
- Matlab, Simulink
- Docker
- JavaScript, HTML, CSS

Language

- Swedish, native
- English, fluent