Calum **Sieppert**

SOFTWARE DEVELOPER · STUDENT

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Summary

Current Computer Science student at the University of Calgary. 3+ years experience of web, app, backend, and blockchain software development. Team lead of several successful projects. Nerd who enjoys perfecting his development environment. Interested in the design of maintainable, robust, and well-tested software. Passionate about tackling challenging problems while learning and teaching a lot along the way.

Education

University of Calgary   *Calgary, AB, Canada*

BACHELOR OF SCIENCE IN COMPUTER SCIENCE   *Sep. 2019 - Dec. 2023*

- **In-major GPA: 4.0/4.0, GPA: 3.95/4.0**

Work Experience

MLabs Ltd.   *Remote*

SOFTWARE DEVELOPER   *May 2022 - Jan 2023*

- Auditor of the Indigo Protocol, a synthetic assets protocol written in Haskell for the Cardano blockchain, with a **daily trading volume of ~$49,000**.
- Developer of the Cardano Transaction Library (CTL), a popular browser-ready Purescript library for building Cardano smart contract transactions.
- Designer of the initial version of the CTL testing library, facilitating easy automated testing of smart contract transactions.
- Developer of Seabug, an NFT marketplace for Cardano which implements a novel self-governed NFT protocol.

Cerno Health   *Remote*

SOFTWARE DEVELOPER (CONTRACT)   *May 2021 - Sep. 2021*

- Expand client's reach into the Fitbit wearable market by developing two embedded, networked applications for early detection and longitudinal monitoring of chronic disorders.
- Enable client's objective monitoring tools by building application to process and store continuous stream (**2KB/sec**) of user generated biometric data over long periods of time through integration with wearable device sensors and existing AWS back-end.
- Maintain **~0%** data loss and ensure consistent function in resource constrained (**64K RAM**) and highly variable environment (two devices, phone and wearable, with very inconsistent networking).

M2M Tech   *Remote*

SOFTWARE DEVELOPMENT LEAD   *Jun. 2020 - Aug. 2021*

- Publish multiple applications to Android and iOS by managing team of 4 developers using the Flutter framework while following industry clean code and DevOps best practices.
- Increase employee effectiveness by leading and mentoring new developers by giving thorough work reviews and leveraging individual strengths.
- Provide intelligent real estate property recommendations for renovators by creating a custom natural language processing algorithm with SpaCy and Python.
- Ensure future scalability and low response times by designing back-end architecture with a GraphQL API using Python and Starlette hosted on an AWS EC2 instance.

Projects

NLP REPORT CLASSIFIER   *May 2020 - Jul. 2021*

- Improve critical incident report processing at the Calgary YWCA by collaborating on a team of 5 students to develop an open source project with Python and React.

SMART SLEEP   *2020-2021*

- Integrated alarm application to optimize wake-up time. Uses machine learning to reverse engineer Fitbit's sleep cycle detection. JavaScript; Python; AWS

RECIPEASE   *2021*

- Manage a team of 3 students as **team lead** to build website for finding recipes and managing and purchasing ingredients. Project earned full marks despite challenging conditions. C#; .NET; MySQL; Entity Framework Core; Blazor WebAssembly

Skills

Languages   Haskell; Purescript; Python; JavaScript; TypeScript; Java; HTML/CSS; Dart; C#; C++; C; Rust

Technologies   Cardano Smart Contracts; CTL; Nix; NumPy; Pandas; Scikit Learn; Pytorch; Jupyter; MongoDB; SQLite; Git; React; Node.js; Stripe; AWS; Docker; Entity Framework Core; MySQL; PostgreSQL; .NET; Flutter; GraphQL; SpaCy; NLTK; Blazor WebAssembly; Starlette; Jira