Colton Osterlund

Full Stack Software Engineer

Full Stack Software Engineer with experience working on production level software in a diverse range of industries. Enjoys working in a fast-paced, continuous learning environment.

Professional Experience

Arcurve
Software Developer II | May 2022 – Present

- Worked in multiple team based environments with 15+ industry clients to design, build and integrate solutions to complex business problems using agile processes and a wide variety of technologies.
- Gained valuable insights and experience developing, reviewing and deploying large-scale production level software for leading organizations in industries such as architecture, energy, media and entertainment, non-profit, oil & gas, telecommunications, transport, and the Canadian Federal Government.
- Represented the company by organizing (2022) and competing in (2023, 2024, 2025) the YYC Tech Gives Spam Cup competition to raise food, funds and volunteering hours for the Calgary Food Bank.
- Provided corporate and technological mentorship to two sets of Arcurve internship students through the Arcurve Internship Buddy program.
- Contributed to multiple internal tools and knowledge repositories used daily across various divisions of the company.

Creative Protein Solutions (CPS)
Junior Software Developer | May 2019 – May 2022

- Worked as a solo developer to design and implement embedded C software responsible for the capture and transmission of biosensor data as well as the regulation of a mounted thermocouple and induction charging coil for the CPS handheld Calciulate device using the Bluetooth Low Energy (BLE) protocol stack on a Silicon Labs BGM113 module.
- Designed and implemented an iOS mobile application using the Swift UIKit framework capable of connecting to the Calciulate device via the BLE protocol to control the execution of tests and the display of test results.
- Designed and implemented a REST API server using the Node.js and Express.js frameworks to handle CRUD operations on user, herd and test data stored in a MySQL database.
- Developed and maintained an ROI calculating web application using a .NET Core backend and React frontend frameworks to collect farm-entered cattle herd data and display the estimated cost-benefit as a result of integrating the CPS mobile application into the farms herd management procedures.

Contact

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Skills

- .NET
- Amazon Web Services
- Angular
- Blazor
- JUCE C++
- Databricks
- Docker
- Git
- Javascript
- Jira
- Microsoft Azure DevOps
- Python
- React
- Snowflake
- SQL

Education

Schulich School of Engineering, University of Calgary
BSc. Software Engineering (Major), Biomedical Engineering (Specialization) | 3.6 GPA | 2022

Certifications

Amazon Web Services Cloud Practitioner – *Amazon Web Services (AWS) | Sept. 2022*

Databricks Certified Data Engineer Associate – *Databricks | Apr. 2023*

Professional Experience (cont.)

Destine Health
Software Engineering Internship | July 2020 - August 2021

- Designed and implemented a web application using a .NET Core MVC backend and an Angular frontend alongside a custom Open Source Routing Engine API instance and a MySQL database, all deployed via a Docker image hosted on Microsoft Azure. This web application was responsible for drive-time data collection as well as the management of user accounts and data by the site administrators.

Garmin
Software Engineering Capstone | September 2021 - April 2022

- Designed and implemented a modular warehouse sorting and management system using the Dynastream Innovations D52 SoC module series with ANT+ wireless network technology using embedded C software compiled through the Keil programming toolchain.

Personal
Freelance Software Developer | January 2023 - Present

- Working alongside the band Polyphia to design, develop and ship custom cross platform Virtual Studio Technology (VST) software for music production using the JUCE C++ digital signal processing framework, a self-contained Sqlite database and an Angular webview frontend embedded through WebKit (MacOS) and WebView2 (Windows).
- Conducted research and development of a Musical Instrument Digital Interface (MIDI) data generation tool on the Databricks platform hosted on an AWS EC2 instance. Training was done with the Lakh MIDI dataset on two Seq2Seq transformer models using both the PyTorch and Tensorflow frameworks, while prompt optimization was performed on an LLM model using the LangChain framework for contrast and comparison. All three models were finetuned using a MIDI dataset supplied by the band Polyphia.

Awards

Studentship Research Funding Award – *Program for Undergraduate Research Funding Award (PURE) | May 2019*

Studentship Research Funding Award – *Schulich School of Engineering, Biomedical Engineering | May 2020*

Intern of Merit Award – *Schulich School of Engineering, Destine Health | Sept. 2021*