Soren Bradley

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Programming Skills

- **Languages**: Rust, Python, C, C++, C#, Java, Ruby, Dart, Haskell, Prolog, Go / Golang, R, Bash, Zsh, JavaScript, TypeScript, PHP, Swift, Obj-C / Objective C, CSS, HTML
- **Databases**: Postgres, Sqlite3, MongoDB, Redis, MySQL
- **User Interface Libraries**: Qt, Muai, Blazor, HTMX, SwiftUi, UiKit, React, Flutter
- **Libraries**: OpenCV (CPP & Python), TensorFlow, ArcPy, Keras, Scikit-learn Qt5-6, MatplotLib, Numpy, GeoPandas, Pandas, Pyside6, PyQt5-6, React, NodeJS, GDAL, Entity Framework, SwashBuckle, OpenAPI, Tailwind, KingFisher
- **Web Frameworks**: Django, Flask, Axum, Ruby On Rails, Gin, Fiber, Echo, Actix, Leptos, Spring Boot, Dotnet / .Net
- **Technologies**: Google Cloud, Azure, Git, Docker, Kubernetes, Make, CMake, QMake, Pip, Latex, GCC, Office 365, Windows Build System, Windows Subsystem For Linux, PowerBi, Linux (Debian & Gentoo), ArcGIS Pro/Online, QGis, Anaconda, Jupyter notebooks, Plot.ly, tmux, nu-shell, Figma, Postman, Curl, 0Auth, JIRA, .NET, Swagger, OpenAPI, OpenAI ChatGPT, Azure OpenAI Service, Selenium, JWT, Auth0, Apache Kafka
- **Editors**: Jetbrains Products, Visual Studio, Visual Studio Code, Emacs, Xcode

Experience

- **Seamless Technologies** — Calgary, CA
  Fullstack Developer — *Oct 2023 - July 2024*
  - **Backend Development**: A backend built in the .Net/DotNet Web Framework and Entity Framework / EF. Database maintenance, creation or maintenance of endpoints, authentication and authorization, and data modelling. A micro-service written in Golang using Echo and other proprietary libraries was built to find and acquire unknown product data.
  - **Web & Extension Development** : A Chrome Extension built in React, that includes authorization, authentication, account management, offers fit recommendation services while shopping online, as well as training and scraping work flows for advanced users. Account Management Web App for users to edit account information, previous product that were viewed.
  - **Mobile Development**: An IOS Application currently in beta that serves to have future parity with the Chrome extension and web app accompanied by an A IOS Share Extension to share web data with Seamless Backend API to build recommendations for clothing sizes. The current application uses Swift 5 and SwitfUI.
  - **Data Acquisition Techniques**: Identifying and problem solving issues with data acquisition techniques and implementing solutions.
  - **Research & Developement**: Inquiring about new technologies to solve technical problems and building test scenarios or patterns to ensure that the technology (Language, Library, or framework) will fit the requirements identified.
  - **Software Testing**: Building test patterns for all the production applications
  - **Continuous Integration**: Building development and production CI pipelines for Seamless software products.
  - **Identifying Key Development Objectives**: Collaborate with executive staff to define key objectives and limitations for the Seamless software products and develop timelines for future product development.
- **Sawback Technologies** — Calgary, CA
  Software Designer — *Jan 2022 - Jan 2023*
  - **Commercializing Machine Learning Research**: Collaborate with the machine learning team to take research and tests into customer-facing services.
  - **Collaborate With Executive Staff**: Collaborate with software and machine learning team members to do code reviews and provide a space to allow members to ask questions and seek help with problems encountered.

- **Defining Deliverables**: Collaborating with executive staff to define future deliverables for the software team as well as ways for the team to accomplish its goals.
- **Machine Learning Pipelines**: Creating machine learning pipelines for cleaning and augmenting data for training models.
- **Machine Learning Models**: Building Convolutional neural network and Geo Spatial clustering models.
- **Organize Resources**: Ensuring that development and production environments are pre-paired and well-documented for remote servers and the cloud. Maintaining environments to account for new technologies and dependency updates when applicable.
- **Instruction**: Provide instruction to members of the software and machine learning teams on code quality and design. Strategizing and working with members of the team to find solutions. Finding resources for team members to develop their skills.
- **Signal Processing**: Work with research and development team to implement and test different methods of signal processing for internal libraries.
- **Data Visualization**: Research and implement libraries tools for visualizing data (Matplotlib, QCustomPlots). Develop internal tools for visualizing signal and data processing for near-surface datasets for objects of interest.
- **Setting Up & Maintenance of Cloud Services**: Developing internal resources for creating development and production environments that can be used in the cloud and Sawback servers. Ensuring the environments are stable and accessible to members of all teams, including but not limited to: database management, creating docker containers, and templates for workspaces.
- **Software as a Service**: Collaborating with executive staff to define the software suite to be sold by Sawback. Designing and implementing three main software products: a data analysis tool (Python & CPP), a data collection tool (CPP), and a web portal (Django & Flutter).
- **UX/UI**: Designing UI for web and GUI applications used internally and client facing. Creating consistent and user friendly design patterns.
- **GPR Data Analisys**: Building an internal library to analyze and adapt different GPR file formats for ensuring Sawback data processing was synchronous or better than other methods of GPR data processing.

School Research

- **Performance of Sorting Algorithms** — Calgary, CA
  Computer Science: Senior Project — *Jan 2019 - June 2019*
  - **Focus**: build a tool that will show the performance of sorting algorithms on quantitative CPU metrics
  - **Considers**: A way to create a Python test environment for sorting algorithms using a Linux distribution to analyze key CPU metrics, exploring how sorting algorithms interact with hardware.
  - **Implementation**: Creating a pseudo-framework in Python that hooks into Linux kernel processes to collect CPU information about a set of well-known sorting algorithms and creates a suite of tools to compare and analyze results.
  - **Tools**: Python, Linux (Ubuntu 18.10, pyRAPL, perfutils, pandas
  - **Paper**: Available upon request
- **Creating an Extensible GUI for the S3 Speed Scaling Simulator** — Calgary, AB
  Computer Science: Senior Project — *Jan 2023 - May 2023*
  - **Focus**: A modular design for creating an analysis tool that can adapt to changes in the S3 Scaler by modifying a configuration file instead of requiring changes to the code base.
  - **Considers**: Extending the existing S3 Speed Scaling Simulator, modifying a subset of classes to make adding scheduling algorithms to the scaling simulator easier. Also, focusing on concepts for a modular GUI and making the project OS agnostic using CMake to ensure that the project is more accessible to future students.
  - **Implementation**: Create an OS-agnostic project structure using CMake. A refactor of the existing CPP code base focusing on modularity. Creating a user-programable GUI for processing the results of the scaler.
  - **Tools**: Python, CPP, CMake, pandas, Tkinter, MatplotLib
  - **Paper**: Available upon request

Education

- **Mount Royal University** — Calgary, AB
  Bachelor of Science, major in Computer Science — *September. 2018 – June. 2023*

References

Available upon request