

ANTHONY HANA

☎ (289) 921-6397 | ✉ anthonyhana04@gmail.com | 🐙 github.com/anthonyhana04 | 🔗 linkedin.com/anthonyhana

TECHNICAL SKILLS

Languages: Swift, Java, Python, C, JavaScript, R, SQL, Elm, C#, Haskell.

Software: PyTorch, PostgreSQL, Node.js, Flask, AWS, Angular, Pandas, Numpy, Pillow, AppKit, UTI, GTFS.

Technologies: JupyterHub, Jira Confluence, RStudio, Overleaf, DataGrip, SAS OnDemand, Git, Docker, Xcode.

EXPERIENCE

Coding Workshop Mentor

Sept 2024 - Present

McMaster Start Coding

Hamilton, ON

- Introduced students to functional programming using Elm and Haskell during McMaster's Reading Week outreach, emphasizing pure functions, immutability, and declarative syntax.
- Utilized the Stable.Rocks environment to teach program structure, function composition, and user-defined types, helping students build foundational understanding of functional logic and visual computation.
- Guided students in creating interactive animations by mapping coordinates and geometric shapes onto Cartesian planes, reinforcing mathematical reasoning through code.

PROJECTS

MacPad: macOS Native Text-Editor 🐙 | *Swift, SwiftUI, AppKit, Swift Concurrency, UniformTypeIdentifiers*

- Developed high-throughput asynchronous file I/O for plain-text and RTF documents, delivering near-instantaneous (<100ms) load/save times and a lightweight, freeze-free editing experience.
- Features dynamic theming, atomic save routines, unsaved-change indicators, and state-restoration to ensure seamless native UX and robust data-loss prevention.
- Engineered multi-encoding text handling with automatic format detection and lossless conversion across 18+ encodings (UTF-8, ASCII, etc.) with guaranteed document integrity.

Real-Time Transit Visualization Platform 🐙 | *Python, JavaScript, HTML, CSS, Flask, GTFS Protocol Buffers,*

- Designed a full-stack web application that provides real-time visualization of Hamilton's public transit system, parsing GTFS real-time protocol buffer data to display bus locations, routes, and stops on an interactive map.
- Engineered a modular JavaScript architecture with separate components for map, route, bus, and stop management, improving code maintainability while preserving a seamless user experience with 60-second update intervals.
- Developed a Python backend that processes complex transit datasets, separating static and real-time data handling, and creating a RESTful API that efficiently serves route, vehicle position, and stop information to the frontend.

Amazon Review Classifier: Multi-Label Classification for Customer Feedback 🐙 | *Python, NLTK, Scikit-learn, Pandas*

- Developed a multi-label classification model to categorize Amazon customer reviews into six key aspects: Product Quality, Shipping, Price, Usability, Customer Service, and Aesthetic Appeal.
- Utilized the Amazon US Customer Reviews Dataset from Kaggle, containing over 4,000 reviews, and manually annotated each review to create a robust, labeled training dataset tailored to the classification task.
- Preprocessed text data using NLP techniques such as tokenization, stemming, and TF-IDF for feature extraction.

EDUCATION

McMaster University

Hamilton, ON

Mathematics and Statistics With Minor in Computer Science

Sept. 2022 – Present

- **Relevant Coursework:** Data Structures & Algorithms, Natural Language Processing, Numerical Linear Algebra, Mathematical Modeling, Databases, Computer Architecture.
- **Extra Curriculars:** McMaster Start Coding, MGDC (McMaster Game Dev Club), Volleyball / Soccer Intramurals,