

Cole Killian

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Developer Skills

Programming Languages	Javascript (React, Node.js), Python (Django, Locust), Bash, L ^A T _E X, Java, C++, Lua
Tools	Google Cloud Platform, Google Cloud Computing, Firebase, Firestore, Stripe

Experience

Harvard High Performance Computing: Web and Performance Testing Intern 2020

- Refactored the user account creation pipeline, increasing processing speed by **15** times.
- Developed performance tests which exposed high load averages on web server hosts; then implemented optimizations to reduce the load by **70%**.
- Implemented quotas on the web interface which enables user's to see how much storage they have remaining.

Artifai Co-Founder 2020

- Making [neural style](#) technology available to non technical users, while streamlining the process for users to purchase their art on a poster/canvas.
- Developed the backend for performing neural-style (Google Cloud Computing and Firebase Functions).
- Developed the user authentication and social databases with (Firebase, Firestore, and Node.js).
- Built the user interface. Visit the business at <https://artif.ai> (React, Webflow).

NeuroTech: Dashboard Team 2020

- Worked with Neurotech to build a non-invasive forearm band that can predict which keys a user is typing without the need for a keyboard. Applications include augmented reality.
- Developed a dashboard for visualizing realtime ML model predictions and signal data (React).
- Built a server for interfacing between ML model predictions and frontend applications (SocketIO, Python).

Age Prediction Via Methylation Data and Machine Learning 2019

- Developed a machine learning model for predicting a human's age based on the methylation data extracted from their blood sample (Keras).
- Achieved **100%** accuracy ± 10 years and $> 90\%$ accuracy ± 5 years.
- Developed a [web interface](#) that enables clients to interact with the machine learning model. Users can tune each of the 25 features and see how predicted age changes (Django).
- Presented research at McGill Science and Synergy. Made the front page of Hacker News with 112 upvotes.

Libravos Co-Founder: Phone Insurance Made Better 2019-2020

- Accepted to McGill's Dobson Cup and Lean Startup Program. [Pitchdeck](#).
- Developed an endpoint for a natural language processing ai chatbot powered by Rasa. It communicated with a mobile phone app built with react-native. [Devpost](#)

Harvard High Performance Computing: Web and Database Intern 2019

- Developed a web interface that enables clients to view, request, or terminate their storage allocations (Django).
- Designed a mysql database model for tracking storage allocations and storage transactions.

Aspine Co-Founder: Website and PWA Development 2018 - 2019

- Developed Aspine, an Open Source project that revolutionizes the user interface for Aspen, a grade checking service, with many new features and improved aesthetics. [Github](#) — <https://Aspine.us>
- Specifications: Uses Node.js and HTML request mimicking to extract students' information and display it nicely in a web app.
- Aspine is now preferred by over **500 students**.

Education

McGill University — B.Sc. Honors Stats and Comp Sci — [Coursework](#) — **CGPA 3.97** Expected 2022

Awards and Honors

University: McGill Renewable Killam Entrance Scholarship, Faculty Of Science Scholarship

High-school: Harvard Book Award, Straight A Award, Excellence in Mathematics Award, Outstanding French Award

Hobbies and Interests

Gym, playing guitar, walking, jogging, and hiking.

Entrepreneurship, blogging, competitive programming, optimizing workflow (.spacemacs, .zshrc, .i3/config).