# Cole Killian

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## Developer Skills

**Programming Languages** Javascript (React, Express), Python (Django, Locust), Bash, LaTeX, Java, C++, Lua
**Tools/Services** Google Cloud Platform, Google Cloud Computing, Firebase, Firestore, Stripe

## Experience

### Harvard High Performance Computing: Web Dev and Performance Testing Intern 2020

- Refactored the user account creation pipeline, increasing processing speed by **15** times (Python, Bash).
- Developed performance tests which exposed high load averages on web server hosts. Identified the source of the load and found a way to reduce it by **70%** (Locust).
- Built a dashboard that enables non technical users to develop a thorough understanding of the Harvard super computer status (React, Passenger, Node).

### 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 (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 $\pm 10$ years and $> 90\%$ accuracy $\pm 5$ 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. It communicated with a mobile phone app to help people learn about phone insurance (Rasa, React-Native). Devpost

### Harvard High Performance Computing: Web Dev 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 (MySQL).

### 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 (Node, HTML request mimicking). Github — https://Aspine.us
- Built an API for extracting student information from Aspen using HTML request mimicking (Node.js).
- 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).