Cole Killian

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Experience

Age Prediction Via Methylation Data and Machine Learning - 30 Hours **2019**
- Developed a machine learning model in Keras for predicting a human's age based on a blood sample. Achieved 100% accuracy ±10 years and > 90% accuracy ±5 years.
- Developed a web interface in Django that enables clients to interact with the machine learning model. Users can tune each of the 25 features and see how predicted age changes.
- Wrote a python notebook script for downloading and parsing raw methylation data from an NIH database.

Libravos Cofounder: Phone insurance made better - 50 Hours **2019**
- Accepted to McGill's Lean Startup Program. Pitchdeck. Phone insurance on your terms. Simple. Fast. Libravos
- Developed a mobile phone app in react-native that allows users to interact with a natural language processing ai chatbot powered by Rasa. Devpost

Harvard Research Computing: Web and Database Intern - 350+ Hours **2019**
- Developed a web interface in Django that enables clients to view, request, or terminate their storage allocations remotely.
- Designed a mysql database model for tracking storage allocations and storage transactions.
- Used Python to create a command line interface for interacting with the novel database.

Aspine Cofounder: Website and PWA Development - 120+ Hours **2018 - 2019**
- Developed https://aspine.us, a web interface that revolutionizes the user interface for Aspen, a grade checking service, with many new features and improved aesthetics. Github — https://Aspine.us
- Aspine is now preferred by over 700 students. It generates revenue by displaying ads for school clubs.
- Specifications: Uses Node.js and HTML request mimicking to extract students' information and display it nicely in a web app.

FIRST Robotics Team Controls Leader - 150+ Hours **2018 - 2019**
- Developed a vision processing system for automating the operation of the robot using WPILib, a library desinged to simplify using OpenCV from a robot program.
- Constructed a driver control system in Java that allowed the robot to be operated remotely over wifi via a joystick.

Peer Partners: Admin, Developer, and Tutor - 350+ Volunteer Hours **2016 - 2018**
- Wrote a google scripts text mining program that saves the Peer Partners administration 100 hours a year by automating the parsing of a several thousand-row long google sheet
- The script also aids with pairing those in want of academic assistance and those capable of delivering academic assistance.

Education

McGill University — B.Sc. Honours Statistics and Computer Science **Expected Graduation 2022**
Harvard University — Concurrent enrollment during high school

Awards and Honours

McGill Renewable Killam Entrance Scholarship
Harvard Book Award, Straight A Award, Excellence in Mathematics Award, Outstanding Achievement in French Award.

Extracurricular Activities

Artificial Intelligence Club, Entrepreneur Club, Competitive Programming Club, Debate Team
Boston Sailing Center Frostbiting League. Placed first place out of twenty teams.
Competitive gymnast, Varsity diver, Varsity sailor, Captain of the winning Central Maryland Physics Olympics Team.

Hobbies and Interests

Playing guitar and singing in a band, street performing, and managing my guitar cover YouTube channel
Going to the gym, cooking, walking, and hiking
Entrepreneurial Programming Projects
Optimizing my workflow (.vimrc, .bashrc, .i3/config)

Technical Skills

Programming Technologies Python (and Django), LaTeX, Javascript (and Node.js), Java, Bash, SQL, Plotly