Lucas Harvey

Computer Science, University of Waterloo

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🛠 SKILLS

Programming Languages: Python, SQL, JavaScript, PHP, HTML, CSS, C++, C, Objective-C, Scala

Tools and Frameworks: Flask, Airflow, Hive, React, React Native, XCode, R Studio, Docker, Git

💼 WORK EXPERIENCE

Software Engineer Intern - Machine Learning Platforms | Wayfair
Winter 2020 | Boston, MA

- Increased machine learning training speed by **10x** through the creation of a big data ETL pipeline using Airflow and Hadoop
- Spearheaded development of microservice for the creation and reutilization of ML models, datasets and features
- Reduced multiple file upload memory usage by **100%** through streaming with Python's Requests Toolbelt
- Revamped model and dataset downloads through compression and routing for increased speed and file collision handling

Full Stack Developer Intern - Playfitt App | Intellisports
Summer 2019 | Montreal, QC

- Responsible for end-to-end development of a leveling up system to incentivize long-term user engagement through gamification
- Decreased leaderboard load time by **5x** through SQL optimizations such as indexing predicates and selecting essential fields
- Increased usage of point collection feature by **30x** by separating sections into tabs and guiding user with badges
- Implemented infinite scrolling for dynamic data to ensure scalability of leaderboard feature with growth of userbase

Data Science Intern - Klutch Curling App | Intellisports
Winter 2018 | Montreal, QC

- Automated analysis of large datasets of sensor readings using data cleansing and linear regression in R Studio
- Explored the physics behind the sport of curling for the development of a performance-based mobile application
- Discovered new findings regarding the relationship between friction and the motion of the curling stone

</> PROJECTS

PartyFinder | *JavaScript, React Native, Expo, Firebase*

- Built crowdsourced mobile app for iOS and Android to help students find events happening near them with live ratings
- Amassed **over 5,000 downloads** and **1000 Weekly Active Users** entirely with organic user acquisition
- Utilized the Google Places API to propose relevant address suggestions and locate events on a map
- Led a team of programmers, designers and marketers from ideation to execution

VisionLock | *Python, OpenCV, Dlib, Raspberry Pi*

- Developed home security system capable of unlocking a door and greeting the resident by name with text to speech conversion
- Leveraged OpenCV, Dlib and Haar Cascades to perform facial recognition efficiently onboard a Raspberry Pi

Nexchange | *JavaScript, HTML, CSS, PHP, SQL*

- Founded web-based service that supports students with learning difficulties by providing them with class notes
- Implemented secure authentication by developing custom JSON Web Token library
- Received $3,000 in entrepreneurship prizes as regional winner of the OSEntreprendre competition

🎓 EDUCATION

University of Waterloo | Candidate for Bachelor's of Computer Science
2018 - Present | Waterloo, ON

90.32% Cumulative Average

Dean's Honours List Recipient (3x)

Babbin Family Entrepreneur Scholarship

Relevant Coursework: Sequential Programs, Data Abstraction, Programming Principles, Machine Learning (Coursera)