Lucas Harvey

Computer Science, University of Waterloo

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🛠 SKILLS

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

Tools and Frameworks: Node.js, Flask, MongoDB, Git, React, React Native, XCode, Pandas, Scikit-Learn, Airflow, Hive

💼 WORK EXPERIENCE

Facebook | Instagram Video Calling & Rooms • Software Engineer Intern   May - Sept 2021 | Menlo Park, CA

- Spearheaded the development of **live captions and translations** for Instagram video calling using Automatic Speech Recognition
- Built a cross-plaform module for live captioning in C++ enabling **real-time broadcasting** of captions to multiple call participants
- Linked Hashtags to Instagram Rooms and built GraphQL API for querying Instagram Rooms by Hashtag to increase DAU
- Implemented **latency profiling** to monitor the performance of GraphQL APIs for Instagram Rooms and ensure high reliability

Bloomberg | Trade Machine Learning • Software Engineer Intern   Sept - Dec 2020 | NYC, NY

- Responsible for the end-to-end development of a **Recommender System** for post-trade processing automation rules
- Leveraged **Hierarchical Clustering** to find patterns in user trading data and to consolidate user behaviour into recommendations
- Implemented **back-testing**, yielding **over 99% recommendation accuracy** and automating **over half of total trade volume**
- Devised conflict-resolution heuristic and integrated Recommender System into existing service infrastructure

Wayfair LLC | Machine Learning Platforms • Software Engineer Intern   Jan - Apr 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 discovery of ML models, datasets and features
- Revamped model and dataset downloads through compression and routing for increased speed and file collision handling

Intellisports | Playfitt App • Software Engineer Intern   May - Aug 2019 | Montreal, QC

- Led the 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
- Implemented infinite scrolling for dynamic data to ensure scalability of leaderboard feature with userbase growth

</> PROJECTS

StockTrend | *Python, Scikit-Learn, Pandas*

- Created a parser for Yahoo finance data, back-testing engine and supervised learning model to predict whether a company will outperform or underperform the S&P 500

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

- Built a crowdsourced mobile app for iOS and Android to help students find events happening near them with live ratings
- Amassed **over 7,000 downloads** and **1000 Weekly Active Users** entirely with organic user acquisition

Visit lucasharvey.com for more projects

🎓 EDUCATION

University of Waterloo | Candidate for Bachelor's of Computer Science   2018 - 2022 | Waterloo, ON

91.69% Cumulative Average

Dean's Honours List Recipient (5x)

Babbin Family Entrepreneur Scholarship

Relevant Coursework: Algorithms, Data Structures, Operating Systems, Machine Learning, Combinatorics