





# Lucas Harvey

Software Engineering at the University of Waterloo

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## SKILLS

**Programming Languages:** SQL, PHP, Objective-C, JavaScript, HTML, CSS, Python, C++, C, Swift, R  
**Tools and Frameworks:** XCode, MySQL, Firebase, Git, React Native, Expo, React.js, R Studio

## WORK EXPERIENCE

- IntelliSports**  
intellisports.ca  
Summer 2019  
**Full Stack Developer Intern**  
*Objective-C, XCode, PHP, MySQL*
  - Responsible for end-to-end development of a leveling up system to incentivize long-term user engagement through gamification.
  - Increased feature usage by **30x** by separating sections into tabs and guiding user with badges.
  - Decreased leaderboard load time by **5x** through SQL query optimizations such as indexing predicates and selecting only essential fields.
  - Implemented infinite scrolling for dynamic data to ensure scalability of leaderboard feature.
- IntelliSports**  
intellisports.ca  
Spring 2018  
**Research Intern**  
*Objective-C, XCode, R, R Studio*
  - Automated analysis of large data sets of sensor readings using 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 never observed in the research community.

## PROJECTS

- PartyFinder**  
partyfinder.ca  
*JavaScript, React Native, Expo, Firebase*
  - Built crowdsourced mobile app to help students find events happening near them with live ratings.
  - Utilized the Google Places API to propose relevant address suggestions and locate events on a map.
  - Amassed **over 1000 downloads** in 2 weeks entirely with organic user acquisition.
  - 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 with a servo motor and greeting the resident by name with text to speech conversion.
  - Leveraged OpenCV, Dlib and Haar Cascades to perform facial recognition efficiently within the constraint of limited computational resources onboard the Raspberry Pi.
- Nexchange**  
nexchange.ca  
*JavaScript, HTML, CSS, PHP, MySQL*
  - Founded web-based service that supports students with learning difficulties by providing them with class notes and saved an average of 15 hours per week of manual labour.
  - Implemented secure authentication by developing custom JSON Web Token library.
  - Crafted mobile-friendly user interface using responsive CSS.
  - Received \$3,000 in entrepreneurship prizes as regional winner of the OSEntrepreneure competition.

## EDUCATION

- Bachelor's of Software Engineering**  
2018 - Present  
**University of Waterloo**  
90.67% Cumulative Average  
Dean's Honours List Recipient (2x)