WILLSON WANG

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Education

University of Waterloo   Sep 2018 – Apr 2023

- Bachelor of Computer Science, Dean's List (**3.86/4.0 Cumulative GPA**), Economics Minor
- Coursework: Data Structures, Algorithms, Databases, Human-Computer Interaction, Object Oriented Programming

Work Experience

Wish | *Software Engineer Intern*   Sep 2021 – Dec 2021

- **Reduced operating costs by over $1.8M per year** and minimized resource underutilization by using Kubernetes horizontal pod autoscaling to dynamically scale resources based on CPU load
- Developed **video fingerprinting algorithm** to compute and compare **perceptual hashes** which accurately cluster similar content from over 200k videos using C++, Python, and OpenCV
- **Reduced project size by 20%** by refactoring Go microservice to leverage and reuse existing MongoDB database fields
- Led onboarding of new engineering team by holding meetings and creating architecture diagrams and documentation

Geotab | *Software Developer Intern*   Jan 2021 – Apr 2021

- **Reduced batch deactivation processing time by 10%** by implementing database triggers, stored procedures, and paginated API endpoints using C# and SQL to automate the process and efficiently fetch results
- Improved **authorization server error handling** by implementing API endpoints for **multi-factor authentication** with OAuth2 PKCE flow and developing custom exception classes
- **Decreased customer onboarding time by 5%** by automating device setup and refactoring feature flag configurations

PointClickCare | *Software Engineering Intern*   May 2020 – Aug 2020

- **Reduced application load time by up to 50%** by eliminating redundant React states from component hierarchy
- **Decreased payload processing time** by refactoring data pipeline algorithms in Java and JavaScript to efficiently query, parse, and aggregate medical data from SQL database
- Designed, implemented, and demoed reusable data visualization widgets which fetch health information from API for over 2 million patients using React, Redux, and JavaScript

Purolator | *Front End Developer Intern*   May 2019 – Aug 2019

- **Increased user retention by 25%** by leading redesign, development, and deployment of WCAG-compliant applications with over 1.7 million weekly visitors using HTML, SASS, and Bootstrap
- **Reduced page bounce rate by 40%** by developing JavaScript functions to improve responsiveness of desktop web applications and resolve rendering issues on mobile browsers

Projects

BlueKey - Housing Classifieds Service ↗

- Developed full-stack app for users to post housing classifieds using Node, Express, PostgreSQL, and AWS S3

Insights Extraction ↗

- Won **Intact Insurance Hacker Challenge** at Hack the 6ix 2020 for Flask application which uses entity recognition and sentiment analysis to extract insights from insurance claims with 85% accuracy

Technical Skills

Languages: Python, JavaScript, C++, Go, SQL, C#, Java, HTML, CSS
Technologies: React, Redux, Kubernetes, Node, Express, MongoDB, OpenCV, Flask, Git, Azure, AWS