WILLSON WANG

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Education

University of Waterloo   Sep 2018 – Apr 2023
- Bachelor of Computer Science, Dean's List (**3.87/4.0 Cumulative GPA**), Economics Minor
- Coursework: Data Structures, Algorithms, Databases, Object Oriented Programming, Human-Computer Interaction

Work Experience

Meta (Facebook) | *Software Engineering Intern*   May 2022 – Aug 2022
- **Saved over 4 weeks of engineering time per year** by creating a Hack (PHP) framework to automatically deprecate commerce enforcement config rules, ML models, and keywords, **reducing deprecation time by 80%**
- **Decreased experimentation time by 35%** by expanding API support and developing automated workflows to orchestrate experiments, minimizing manual intervention required by engineers
- Improved Marketplace listing verification speed and overall system performance by implementing heuristics that identify ineffective enforcement constraints, **eliminating over 64B unnecessary daily integrity reviews**
- Scoped and launched 5 additional features by leading design discussions with cross-functional ML engineering teams

Wish | *Software Engineering 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 Engineering 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 query results
- Improved authorization server error handling by developing custom exception classes and implementing API endpoints for **multi-factor authentication** with OAuth2 PKCE flow
- **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
- **Reduced page bounce rate by 40%** by developing JavaScript functions to improve responsiveness of desktop web applications and resolve rendering issues on mobile browsers

Technical Skills

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