WILLSON WANG

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Technical Skills

Languages: Python, Go, SQL, PHP (Hack), C++, C#, JavaScript/Typescript

Technologies: Terraform, Kubernetes, React, Bazel, Node, Express, GraphQL, PostgreSQL, Flask, Git

Work Experience

Datadog | *Software Engineer* Jul 2023 - present

- Implemented **libraries in Python and Go** to perform authorization checks for **over 4.8 billion API requests per day**
- **Reduced database sync time by 40%** by creating cron job which removes unreferenced permissions from SQL table
- Improved application security by using JWT-encoded permissions to restrict access to internal support tool and APIs
- Developed Go program which parses API response and automatically generates code for Python and Go library files
- Spearheaded development of OKR by onboarding new hires to project and providing status updates to management

Datadog | *Software Engineer Intern* Sep 2022 - Dec 2022

- **Reduced customer onboarding time by 30%** by designing, developing, and shipping a full-featured React user interface
- Productionalized IP allowlist feature by adding audit logs, rate limiting, and additional quality-of-life endpoints
- Improved API reliability by creating resource monitors in Terraform which notify on-calls of high error response rates

Meta (Facebook) | *Software Engineer Intern* May 2022 – Aug 2022

- **Saved 3 weeks of engineering time per year** by creating a Hack (PHP) framework to automatically deprecate low-performing commerce enforcement config rules, ML models, and keywords, **reducing deprecation time by 80%**
- **Decreased experimentation time by 35%** by expanding API support and automating experiment workflows
- Expedited Marketplace listing verification by implementing heuristics to identify obsolete enforcement keywords, **eliminating 64 billion unnecessary daily integrity reviews** and reducing infrastructure-related operational costs
- Scoped and launched additional features by leading design discussions with cross-functional ML engineering teams

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

- **Saved $1.8 million per year** in operating costs by dynamically scaling Kubernetes pods based on traffic and CPU load
- Implemented Python clustering algorithm to **detect duplicates among 200k videos** using hash edit distances
- **Reduced project codebase size by 20%** by refactoring Go microservice to leverage existing MongoDB database fields
- Developed algorithm in C++ and OpenCV to asynchronously **hash videos by content** and save result as file in AWS S3
- Led onboarding of new engineering team by holding meetings and creating architecture diagrams and documentation

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

- **Decreased account deactivation time by 10%** by refactoring C# data pipelines and creating temporal SQL tables
- **Reduced API payload size by 60%** and decreased API response time by implementing database query pagination
- Developed endpoints to support multi-factor authentication with PKCE mechanism to prevent CSRF injection attacks

Education

University of Waterloo Sep 2018 – Apr 2023

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