

# Albert Zhong

albertzhong.com ♦ github.com/albert-zhong  
azhong@cs.washington.edu  
(425) 346-0085

## Education

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**University of Washington**, Seattle, WA Sept. 2019—June 2023  
*B.S Computer Science, B.S Mathematics* GPA: 3.84

- Relevant Coursework: Data Structures & Parallelism, Algorithms, Complexity Theory, Operating Systems, Databases, Distributed Systems, Computer Networks, Systems Programming

## Work Experience

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**Uber** June 2021—Sept. 2021  
*Software Engineer Intern* San Francisco, CA

- Optimized Uber's critical tier-1 Go service handling product lookup by geolocation at 400,000 QPS
- Implemented a server-side filtering API and optimized the product matching algorithm to address performance issues
- Added server-side product filters to call patterns across downstream Eats, Rider, and Driver services
- Halved peak p99 latency from 200 ms to 100 ms and reduced error rate from 0.2% to 0.1%, helping Uber to scale to more cities and product types

**University of Washington** Mar. 2021—June 2021  
*Teaching Assistant* Seattle, WA

- CSE 421: Introduction to Algorithms
- Covered graphs, trees, greedy algorithms, divide and conquer, dynamic programming, network flow, and P vs NP
- Held weekly office hours, answered discussion board questions, and graded problem sets and exams

**Pulumi Corporation** June 2020—Sept. 2020  
*Software Engineer Intern* Seattle, WA

- Contributed to Pulumi, an open-source platform that enables developers to declaratively provision cloud infrastructure using familiar programming languages
- Shipped a code generator in Go that produces strongly-typed Kubernetes CustomResources from CustomResourceDefinitions (CRDs), allowing engineers to easily manage complex CRDs
- Auto-generated Pulumi libraries across TypeScript, Python, Go, and C# for 150+ Kubernetes Operators

## Projects

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**ecoBay** (winner at the Caltech hackathon)

- First place winner at HackTech 2020 for Best Environment & Sustainability Hack
- Created a Chrome extension that parsed shopping pages with Google Cloud NLP and returned local eBay products to minimize carbon emissions from shipping

**barbell2go** (winner at the Rice hackathon)

- First place winner at HackRice X for the Bill.com API Challenge
- Wrote a Django web app for gym equipment delivery with Bill for payments and the Google Maps API for delivery routing

**Distributed Systems Lab** (CSE 452)

- Built a linearizable, sharded, available, load balancing, and transactional key-value store in Java
- Implemented a Paxos consensus algorithm, primary-backup replication, and at-most-once RPC calls

**SimpleDB** (CSE 444)

- Built a relational database management system in Java, supporting ACID transactions and a Selinger query optimizer

**Seagull**

- Implemented a linear regression model to predict personality traits across US cities based on public tweets
- Created a data pipeline in Python that streams training data from the Twitter API to a MySQL database

## Software Skills

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<b>Programming Languages</b>	Python, Go, Java, C, C++, JavaScript
<b>Frameworks &amp; Tools</b>	Django, React.js, PostgreSQL, Kubernetes, Git