Albert Zhong

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Education

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

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

- Optimized rt-products, a critical tier-1 Go service handling product lookup by geolocation at 400,000 QPS
- Documented the feasibility of geofence cleanup and a more granular city refresh algorithm
- Implemented server-side filtering and optimized the product matching algorithm to address performance issues
- Halved peak p99 latency from 200 ms to 100 ms, 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 based on CustomResourceDefinitions (CRDs), allowing engineers to easily manage complex CRDs
- Auto-generated Pulumi libraries for TypeScript, Python, Go, and C# for 150+ Kubernetes Operators
- Latest releases: *github.com/pulumi/crd2pulumi*, *github.com/pulumi/pulumi-kubernetes-crds*

Projects

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 consesus 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

Programming Languages	Python, Go, Java, C, C++, JavaScript
Frameworks & Tools	Django, React.js, PostgreSQL, Kubernetes, Git