

David Zhang

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Languages	Python, Java , Kotlin, Typescript/NodeJS, Swift, Objective-C, Scala, C++
Technologies	Google Cloud, AWS, gRPC/Protobuf, Flask, GraphQL, Temporal, Airflow Android, React Native, Docker, Gradle, Bazel
Databases	Cloud Spanner, PostgreSQL, MongoDB, Redis
Tools	Git, IntelliJ, Xcode, Android Studio, Visual Studio Code

EDUCATION

University of Waterloo

Sep 2013 - Apr 2018

Bachelor of Software Engineering (Dean's Honors List with Distinction)

WORK EXPERIENCE

Software Engineer, Scale AI

Nov 2022 - Present

Seattle WA, Remote

- Integrated image-text bimodal ML models and externalized APIs for classifying product taxonomy
- Combined OCR (optical character recognition) ML models and OpenAI GPT3 prompting to provide enhanced attribute extraction capabilities using image and text from catalog products

Software Engineer, Spectacles AR @ Snap Inc

Sep 2021 - Nov 2022

Seattle WA

- Created hand tracking experimental lenses and explored new capabilities via patent filing
- Architected and built metrics framework to improve observability of lens usages and performance
- Integrated Maven/Bazel into in-house OS-agnostic IPC framework for use in Android services
- Added build integration pipeline to improve development efficiency for lens updates on firmware

Software Engineer, Monetization @ Snap Inc

Aug 2018 - Sep 2021

Seattle WA

- One of the founding engineers for building PCS (product catalog service), overseeing a scalable advertiser-facing API platform and various data pipelines to support Snap's dynamic product ad (DPA) and AR/commerce shopping experience offerings
- Leveraged Dataflow and Airflow to build metadata export pipeline between BigTable & BigQuery, built relevant Looker visualizations off of BigQuery for DPA top-level metrics
- Built generic job workflow framework that powers set categorization of products and items of other verticals, processing millions of items simultaneously
- Implemented GraphQL API that fronts all requests from advertiser-facing Business Manager and Ads Manager to the backend service via async gRPC client, reducing load time of Business Manager for large advertisers by up to 96%
- Designed and built generic reporting framework and APIs to facilitate self-diagnosis of catalog issues for advertisers, reducing customer support requests by 50% HoH

Data Engineer Intern, Snap Inc

Los Angeles CA

Sep 2017 - Dec 2017

- Built data sampling tools for aggregation engine running on Spark cluster
- Added union support for aggregation across multiple data sources
- Built Airflow pipeline jobs to generate daily tier-1 business metrics
- Set up new testing and deployment process for in-house Airflow
- Migrated in-house Airflow to latest version and incorporated custom features into UI

Software Engineer Intern, Snap Inc

Los Angeles CA

Jan 2017 - Apr 2017

- Implemented end-to-end notification settings for Snap Ads Portal
- Built and improved client-side ad search through caching optimizations
- Added instrumentation to track network latency and daily active users
- Improved memory and CPU usage across iOS/Android mobile clients

Software Engineer Intern, FiveStars Loyalty

San Francisco CA

May 2016 - Aug 2016

- Delivered revamped Explore View using Autolayout and Restkit
- Increased active users by 15% through Branch deep linking
- Designed request caching manager to reduce network overhead by 50%
- Identified hotspots within app and improved launch performance by 40%

Software Engineer Intern, OANDA

Toronto ON

Aug 2015 - Dec 2015

- Developed asynchronous flow to reduce registration time by 20%
- Reduced onboarding time by 80% through Vagrant setup
- Built custom web dashboards to monitor sprint pipeline quality

Software Engineer Intern, Eventmobi

Toronto ON

Jan 2015 - Apr 2015

- Built and maintained Eventmobi's Flask-based event management RESTful API
- Implemented and benchmarked RabbitMQ-based asynchronous API
- Deprecated legacy content manager and migrated critical business logic to leverage new APIs

Software Engineer Intern, Trustwave

Cambridge ON

May 2014 - Aug 2014

- Developed Kafka-based distributed messaging tool for SIEM Next-Gen
- Researched migration feasibility from MySQL to MariaDB/Cassandra
- Benchmarked read/write performance of MariaDB storage engines