

Jeffrey Chou

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ENGINEERING EXPERIENCE

Apollo GraphQL, *Software Engineer*, San Francisco, CA

Aug-Dec 2022

- Designed and implemented a migration strategy for shifting existing Kubernetes manifest-based infrastructure to a new platform GCP project using Helm, Helm subcharts, and CircleCI
- Optimized Memcached instances by revamping caching and key invalidation strategies to reduce load on Memcached and Apache Druid in remediation of a major outage
- Identified, measured, and remediated potential engineering cost sinks in GKE and Druid, contributing to a yearly reduction of engineering operational spend by over \$1,000,000
- Instituted Renovate, an open-source package manager, self-hosted in CI, and established a modular schema & adoption strategy to update Gradle, NPM, Docker, etc. dependencies across all repositories in the organization
- Performed SQL query optimization on backend APIs that were causing high stress on Postgres databases

Apollo GraphQL, *Software Engineer Intern*, San Francisco, CA

May-Sept 2021

- Developed and deployed a new data pipeline using Apache Airflow, Google Cloud Composer, Meltano, and Singer for the Data team to automatically track and load PagerDuty, StatusPage, Jira, and CircleCI data into BigQuery
- Implemented backend GraphQL APIs and schemas with Kotlin, Typescript, and Exposed for new enterprise Contracts feature with ~1,000 WAU and 20,000+ total contract launches
- Designed and developed LogMetrics2Datadog Pub/Sub service that expedites key GCP metrics to Datadog, enabling engineers to be alerted of potential outages with virtually zero delay, compared to ~8 minute delay with Datadog's native integration
- Integrated database schema linting in CircleCI to proactively detect SQL query performance pitfalls in Flyway migrations
- Incorporated Terraform checks for prod, staging, and global environments in CircleCI to ensure the liveliness of Terraform configurations

ServiceNow, *Software Engineer Intern*, Santa Clara, CA

May-Aug 2020

- Designed and implemented plugin load duration tracking during upgrades for Quebec release with 30,000+ WAU
- Captured plugin/file load times in Upgrade Engine and persisted in a new MariaDB schema
- Implemented Angular frontend and backend REST API for tracking plugin /plugin file upgrade duration metrics and full Selenium automation testing integration for Upgrade Monitor
- Upgraded multiple file attachment engine and modal to reuse duplicate attachments, reducing superfluous file duplication in DB
- Partnered with PM and UX team to design new post-upgrade metrics and interfaces

IoTeX, *Software Engineer Intern*, Menlo Park, CA

Jun-Aug 2019

- Independently wrote and developed <https://codelabs.iotex.io>, providing hands-on guided tutorials for IoTeX developers
- Developed the first full-stack decentralized application with React and Solidity on the alpha version of the blockchain
- Built GraphQL APIs with TypeScript, Apollo GraphQL, MongoDB that serve IOTX's cryptocurrency Android mobile wallet

NASA Ames Research Center, *Planetary Sciences Intern*, Mountain View, CA

Jul 2016-Aug 2018

- Coauthored "Mars as a Remnant Planetary Embryo that Survived the Giant Impact Phase"
- Analyzed and visualized results of 150+ terrestrial planet formation simulations using Python and Matplotlib
- Facilitated planetesimal formation simulations on internal supercomputer with Fortran to help identify the optimal conditions for the formation of habitable Earth-like planets

EDUCATION

Cornell University, College of Arts & Sciences, Ithaca, NY

Aug 2018-May 2022

Bachelor of Science in Computer Science, GPA: 3.62

Relevant Coursework: OO Programming & Data Structures (Java) • Data Structures & Functional Programming (OCaml) • Discrete Structures • Computer Systems (Assembly/C) • Foundations of Artificial Intelligence (Python) • Operating Systems (C) • Intro to Database Systems (SQL) • Intro to Computer Networks • Intro to Machine Learning • Intro to Analysis of Algorithms

SPECIALIZED SKILLS & INTERESTS

Technical: Java, Python, Javascript, Typescript, Kotlin, OCaml, HTML, CSS, SASS, Golang, Solidity, Bash, SQL

Skills: React, Node, Docker, REST API, GraphQL, SQL, PostgreSQL, Google Cloud Platform (GCP), Kubernetes, CircleCI, Terraform, Terragrunt, Git, Github Actions, Matplotlib, Babel, Jelly, MongoDB, Redis, Webpack, Express, Exposed, Gradle, Helm, Singer, Meltano, Exposed, MariaDB, Cloud Composer, Apache Airflow, BigQuery, Mustache, Groovy

Language: English (Fluent), Chinese (Fluent), Japanese (Basic)

Interests: Surfing, Photography, Powerlifting, Fashion, Pickleball