Gabriel Alzate

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EDUCATION

Pomona College, Claremont, CA
Bachelor's in Computer Science, minor in Mathematics; GPA: 3.92 Expected May 2021

Relevant coursework: Algorithms (IP), Machine Learning (IP), Combinatorics (IP), Data Structures, Computer Systems, Linear Algebra, Discrete Mathematics, Intro to Data Science

Programming Languages: Proficient in Java, Python, C, C++; familiar with Dart, HTML, CSS, Javascript

EXPERIENCE

Head Teaching Assistant (TA) - Data Structures; Claremont, CA **Feb 2019 - Present**

- Collaborate with and lead a team of student TA's to tutor 35+ students individually and in small groups
- Conduct 2 weekly mentor sessions to guide students through assignments and address conceptual questions discussed in lecture
- Meticulously grade, provide feedback on, and optimize code for 5-6 students' assignments every week
- Communicate frequently with and give feedback to professors about students' performance as head TA

Software Engineering Intern, **Kalibrr, Inc.**; Manila, Philippines **Jun 2019 - Aug 2019**

- Conducted intensive research on the benefits of using HTTP/2.0-based **gRPC**'s vs. REST API's for Kalibrr, a Southeast Asian online job platform
- Engineered gRPC microservices in **Python** for Kalibrr's **PostgreSQL** database which halved API response deserialization time and reduced payload size by 60%
- Created 3 edge and service proxy servers with **Docker** and **Envoy** to maintain HTTP/1.x backward compatibility with Kalibrr's 650 company clients
- Taught myself **Nginx** and **Golang** to create and optimize these proxy servers, eliminating concurrency errors and reducing response time by 50%
- Deployed an internal **Flutter**-based mobile app in **Dart** that communicates with Kalibrr's first HTTP2-compliant, HTTP1 backward-compatible microservices

Software Development Intern, **Middle Tree (MT)**; Claremont, CA **Jan 2019 - May 2019**

- Developed **Bash** and Zoho scripts to manage the CRM of over 150 students of Middle Tree, a nonprofit education center that provides affordable tutoring
- Created a sign-in/out page that updates MT's database for its daily 10-20 users with a median latency of 32ms using **jQuery** and Google Sheets API

PROJECTS

Wine Variety Text Classification

- Implemented a multiclass decision tree classifier in **Java** that, given a wine review, detects wine variety
- Increased accuracy from 50% to 70% by instead using OVA and AVA decision tree classifiers

Song and Speech Generator

- Developed a Markov Chain to read text with *n*-prefix states and produce speeches and song lyrics in **Java**

PATH (5C Hackathon)

- Created a Flask web app that suggests travel options in Claremont based on transport, price, time, and distance; incorporated Google Direction Services and Uber API

CO-CURRICULAR ACTIVITIES

5C Intramural Badminton Team First Doubles Badminton, Pomona College Sept 2018 - Present
Symphonic Student Association Board Member & Violinist, UC San Diego Jan 2018 - June 2018
Computer Science & Engineering Society Outreach Chair, UC San Diego Sept 2017 - June 2018