# Gabriel Alzate

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## EDUCATION & SKILLS

**Pomona College**, Claremont, CA — Expected May 2021
Major: Computer Science | Minor: Mathematics — GPA: 3.92

**Languages & Tools** Java, Python, C, C++, Bash, HTML, CSS, JS; Git, Docker, Vim, LaTeX
**Relevant coursework** Algorithms (IP), Machine Learning (IP), Combinatorics (IP), Data Structures, Computer Systems, Linear Algebra, Discrete Mathematics

## EXPERIENCE

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

- 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 reduced API response deserialization time and payload size by 50%
- Added HTTP/1.x backward compatibility by launching 3 **Docker**ized edge and service proxy servers
- Taught myself **Nginx** and **Envoy** to optimize these proxy servers by eliminating concurrency errors and reducing response time by 40%
- Deployed an internal **Flutter**-based mobile app in **Dart** that communicates with Kalibrr's first HTTP2-compliant, HTTP1 backward-compatible microservices

**Pomona College Computer Science Department** — Jan 2019 - Present
*Head Teaching Assistant (Data Structures & Advanced Programming)* — *Claremont, CA*

- Collaborate with and lead a team of 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
- Optimize **Java** code for and meticulously grade 5-6 students' assignments every week
- Communicate frequently with and report back to professors about students' performance as head TA

## PROJECTS

**College Course Review Sentiment Analysis** — Nov 2019 – Present

- Devise a web-scraping application to collect and preprocess the text of 7000+ course reviews
- Develop a model to predict course quality based on the sentiment of a course review using NLTK-VADER, a **Python** sentiment analysis tool

**Wine Variety Text Classification** — Oct 2019

- 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

**PATH – Travel Budget App (5C Hackathon)** — Nov 2018

- Created a **Flask** web app that suggests travel options in Claremont based on transportation, price, time, and distance; used the **UIKit** framework to build a responsive website

## EXTRACURRICULAR ACTIVITIES

- Taught introductory CS classes as Outreach Chair of the Computer Science and Engineering Society
- Co-founded UCSD's Symphonic Student Association, an organization committed to building a community of students with a shared interest in classical music