Gabriel Alzate

170 E. 6th St., Box #1418 Claremont, CA 91711-7004
747.275.6113 • gabrielphilip.alzate@pomona.edu • gpalzate.github.io

EDUCATION

Pomona College, Claremont, CA

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

Relevant coursework: Data Structures and Advanced Programming (Java, C, C++), Discrete Mathematics, Linear Algebra, Computer Systems (C), Intro to Data Science (Python)

EXPERIENCE

Software Engineering Intern, **Kalibrr, Inc.**; Manila, Philippines June 2019 - August 2019

- Conducted intensive research for Kalibrr, a regional online job platform startup, to help the engineering team transition to HTTP/2.0 while maintaining HTTP/1.1 backwards compatibility
- Created an HTTP/2.0-compliant demo app in Python to improve data deserialization speed by a factor of 3 and reduce payload size by approximately 60% after learning and implementing gRPC
- Taught myself Envoy, Nginx, and basic Golang to create and optimize HTTP/1.1 proxy servers; ran load tests and eliminated concurrency errors, reducing response time by 50%
- Deployed the demo as a Flutter mobile app and Kalibrr's first HTTP/2.0-compatible Docker microservice

Head Computer Science Teaching Assistant, **Pomona College**; Claremont, CA Feb 2019 - Present

- Collaborate with a team of experienced students to tutor 35 students in small groups for the Data Structures and Advanced Programming class
- Conduct 2 weekly mentoring sessions to guide students through weekly assignments and address conceptual questions discussed in lecture
- Meticulously grade 6-8 assignments per week, paying close attention to code correctness, design, and reliability; and optimizing code when necessary

Software Development Intern, **Middle Tree (MT)**; Claremont, CA Feb 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 tutoring and college counseling
- Created a sign-in/out page using jQuery and Google Sheets API that updates MT's user records 50 times daily; optimized the page for their front desk tablets and deployed the site on Github Pages

PROJECTS

Game Tree: Built a *k*-ary tree in Java to create a computer that plays simple, deterministic games such as tic-tac-toe and prunes losing tree branches

Song and Speech Generator: Developed a Markov Chain to read songs and speeches with *n*-prefix states and produce speeches and song lyrics in Java

Ring Buffer: Implemented a circular buffer in C that uses locks and conditional variables to handle the producer-consumer problem in a thread-safe manner

PATH: Created 'PATH', a web app that suggests the best travel option in Claremont based on transport, price, time, and distance; incorporated Google Direction Services and Uber API

SKILLS

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

Software Tools: Comfortable with UNIX command line, Git, Docker, Envoy, Flutter

CO-CURRICULAR ACTIVITIES

Doubles Badminton Player, 5C Intramural Badminton Team, Pomona College Sept 2018 - Present

Board Member, Violinist, Symphonic Student Association, UC San Diego Sept 2017 - June 2018