Adam Guo

Mathematics and computer science major
Pomona College ('22)

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Hi! I'm Adam. I'm passionate about math and computers, particularly how the two come together to produce fascinating and meaningful results for the real world. To that end, I'm interested in all aspects of computational mathematics, including machine learning, scientific and high-performance computing, and numerical analysis.

I'm also passionate about information technology and computer infrastructure. As an experienced web developer with skills in Linux system maintenance and application deployment, I bring experience and interest in the entire software engineering and computing stack.

Work Experience

Research Assistant *Claremont Graduate University Institute of Mathematical Sciences* **Summer 2019**
Worked with Claremont Graduate University professor Hrushikesh Mhaskar to investigate methods of computing inverse Laplace transforms of linear combinations of point masses, preparing to be published. Implemented algorithms such as Gauss quadrature formula computations and discrete Fourier transforms in Julia, Python, MATLAB, and WolframScript based on significant relevant papers.

Web Developer *Associated Students of Pomona College* **2018 to present**
Developed and maintained student government website in Ruby on Rails, both front-end and back-end. Helped rebuild version 2 of the website from the ground up.

Developer Intern *Coachbase* **Summer 2016**
Maintained and added new features to company website in Node.js, such as video playback and user payment. Automated company backend processes such as marketing emails and client invoices.

Projects

School timetable converter

Node.js-based web app used by all secondary students and teachers at Chinese International School to import their plaintext class schedules into Google Calendar.

School music room booking system

Node.js-based web app used by Chinese International School music department to allow students to book music rooms online. Interfaces with a Google Sheets document managed by the school.

Python music player

Music player written in Python, capable of playing both local files and Spotify music. Indexes files using the MongoDB database software.

Education

Pomona College *Mathematics and Computer Science Major* **2018 to 2022**
Courses taken include Linear Algebra, Vector Calculus, Probability, Discrete Math and Functional Programming. TA for CS department.

Chinese International School Hong Kong *International Baccalaureate* **2008 to 2018**
Nominated and selected as Head Boy of class. Won several awards for academic achievement throughout high school. Earned Bilingual Diploma for English and Chinese.