Kalvin Chang

kalvinc@andrew.cmu.edu • (310) 666-5091 • github.com/kalvinchang • linkedin.com/in/kalvinc

EDUCATION

Carnegie Mellon University – School of Computer Science   Pittsburgh, PA
Bachelor of Science in Computer Science, Concentration in Human-Computer Interaction (HCI)   Dec 2021
GPA: 3.62 / 4.0
Selected Coursework:
> Natural Language Processing, Speech Processing, Nature of Language, Ethics & Policy Issues in Computing, Intro to Computer Systems, Parallel/Sequential Data Structures & Algorithms, Probability Theory for CS, Language Diversity & Cultural Identity, Great Ideas in Theoretical CS, Designing Human Centered Software

Glen A. Wilson High School   Hacienda Heights, CA
GPA: 4.84 / 4.0 | Rank: 1 / 400 (Valedictorian)   May 2018

SKILLS

Technical: JavaScript, C, Python, HTML, CSS, Firebase, Standard ML, Ruby, Git
Languages: English (native, fluent), Mandarin Chinese (native, fluent, CA Biliteracy Seal), Spanish (CA Biliteracy Seal)

EXPERIENCE

Cardinal Blue Software, Inc.   Feb 2020 - Jul 2020
Server Developer Intern, PicCollage   Taipei, Taiwan
- Handled edge cases in the Sign in with Apple authentication flow used by thousands of users
- Rerouted requests on the main server's third busiest route to a microservice by using an **Nginx** reverse proxy
- Implemented active cache invalidation to fix stale content bug caused by time-based cache expiry
- Collaborated to design user onboarding notification tracker w/ **PostgreSQL**, Firebase Cloud Functions/Analytics
- Added NewRelic instrumentation to a slow **GraphQL** query on **Ruby on Rails** server to pinpoint bottleneck
- Enhanced the usability of a content server used by designers by refining its interface with HAML, JS, and CSS

Hopscotch Health Pvt. Ltd.   May 2019 - Jul 2019
Software Engineering Intern   Pittsburgh, PA
- Implemented **REST** API endpoints for internal tools in **Python** / **Flask** for a small tobacco cessation/diet startup
- Cleaned, parsed, and summarized 10000+ records from a public cancer hospital in India with **Pandas** and **SQL**
- Developed mobile app's back end with **JavaScript** & **Firebase** Cloud Firestore, Functions, and Messaging
- Managed the release of 2 mobile **Ionic** chat apps to the Google Play Store

Carnegie Mellon University   Aug 2019 - Dec 2019, Aug 2020 - Dec 2020
Teaching Assistant, 15-150 Principles of Functional Programming   Pittsburgh, PA
- Improved the quality of assignments and handouts for a 150+ student course on **SML/functional programming**
- Taught labs to 15+ students and held weekly office hours to provide intuition on key concepts and homework

PROJECTS

Aftermath (aftermathapp.herokuapp.com), **Team Lead and Full Stack Developer**   May 2017 - Oct 2017
- Peer tutoring platform for math that **placed first** in the Congressional App Challenge (CA-39, 138 teams)
- Developed text/voice chat & collaborative sketchboard that rendered marks & LaTeX across devices in real time
- Full stack **JavaScript** Web app with **Firebase**, **Node.js/Socket.io** and Youtube, MathQuill, and Desmos APIs

Question Generation, NLP Team Project (github.com/brianyan918/Question-Answering-NLP)   Oct 2019 - Dec 2019
- Generated grammatical questions on a Wikipedia article using **SpaCy's** dependency parse tree in **Python**

Taipei MRT Station Simulation, Gadgets Final Project (github.com/kalvinchang/mrt-simulation)   Dec 2020
- Fetched train arrival times from an API endpoint with an **Arduino ESP32** and parsed the XML response
- Synthesized music and voice commands indicating arrival/departure with Tone and ESP8266Audio libraries

Text Generation with Markov Chains, Matrices Team Project (github.com/kalvinchang/text-generation)   Dec 2018
- Generated text in the style of a corpus based on unigram (bag-of-words) and bigram probabilities in **Python**