Kevin Tang

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Education

University of California, Berkeley — Berkeley, CA

B.A. in Computer Science, B.A in Astrophysics (GPA: 3.55/4.0) — August 2016 – May 2020

- CS Courses (Tech GPA: 3.63): Algorithms, Machine Learning, Data Structures, Discrete Math and Probability Theory, Linear Algebra, Computer Architecture, Operating Systems, Networks, Computer Security
- Astrophysics Courses (Tech GPA: 3.30): Quantum Mechanics, Electromagnetism and Optics, Mechanics, Thermodynamics, Cosmology, Multivariable Calculus, Linear Algebra, Data Science Lab, Planetary Astrophysics

Experience

Amazon (AWS) — Palo Alto, CA

Incoming Software Development Engineer — September 2020

The Aerospace Corporation — El Segundo, CA

Software Systems Assurance Intern — June 2019 – August 2019

- Created a prototype NLP chatbot in Python to help spacecraft operators navigate launch operation manuals.
- Began an automated testing pipeline on a Jenkins server and created headless frontend testing to output coverage and test reports by Dockerizing Angular app. Created for internal directory search application.
- Implemented and integrated various frontend components in both Angular and React for internal web tools.
- Responsible for high level design and file structure of Spring Boot microservices, data communication, and Angular components for new test file configuration web app.

University of California, Berkeley — Berkeley, CA

Undergraduate Researcher (Filippenko Group) — August 2017 – Present

- Creating an automated data pipeline using Bash and Python that cleans, fits, and analyzes supernovae spectra features to extract data used in publications.
- Collect supernovae data through remote observation runs. Resulted in discovery of two supernovae and co-authorship of three published papers.

NASA Jet Propulsion Laboratory — Pasadena, CA

Mission Optimization Intern — May 2017 – August 2017

- Optimized an algorithm for scheduling mission observation sequences using Matlab and Excel by ranking stars through simulating trajectories, calculating resolution times, and analyzing astronomical data.

Extra-Curriculars

- **Space Technologies at Cal (STAC) Project Engineer** — Fall 2017 - Present
  - Assembled STM flight computer for high altitude balloons flying NASA and LBNL payloads. Wrote telemetry and experiment logic in C responsible for satellite and APRS communication, experiment actuation, and sensor data collection.
- **Computer Science Mentor for Data Structures** — Spring 2019
  - Taught small sections of students topics by guiding them through questions involving data structures, graph traversals, hashing, sorting, object oriented programming, and software design.

Personal Projects

Choco — October 2020

- A social media mobile application that allows easy, secure, efficient video content creation on blockchain and places content creators within a free market that's void of advertisement or monopolies. Made using React Native, Node.js, Express, MongoDB, and eluv.io. Created a REST API that is called from the frontend using Axios to access user and content data from a Mongo instance hosted on Atlas.

Galaxy Morphological Feature Predictor — April 2019

- Created a Pytorch CNN model that identifies various galaxy features within telescope exposures. Utilized Google Cloud GPU computing resources to speed up training and fitting.

Skills

Programming: Python (Numpy, Pytorch, Sklearn), Java (Maven, Gradle), JavaScript (React, React Native, Node, Angular), C, Bash, MongoDB (Atlas, mongoose), SQL, HTML, CSS, Bootstrap, Go, Groovy, Matlab, RISC-V, x86

Other Skills: git/SVN, Docker, Jenkins, Postman, Curl, Expo, SolidWorks, KiCad, Excel, Latex, Illustrator, Photoshop, soldering, 3-D printing, Mandarin Chinese, Super Smash Bros. Melee