

KEVIN TANG

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EDUCATION

University of California, Berkeley

Berkeley, CA

B.A. in Computer Science, B.A in Astrophysics (GPA: 3.52/4.0)

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
- Astrophysics Courses (Tech GPA: 3.30): Quantum Mechanics, Electromagnetism and Optics, Mechanics, Thermodynamics, Cosmology, Multivariable Calculus, Linear Algebra, Data Science Lab, Planetary Astrophysics

EXPERIENCE

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.
- **Introduction to General Astronomy Undergraduate Instructor** Fall 2019
 - Responsible for teaching section, holding office hours, and writing quizzes/worksheets for survey class of 850 students. Topics covered include stellar evolution, galaxies, supernovae, black holes, and quasars.
- **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