# 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: 3.6): Algorithms, Machine Learning, Data Structures, Discrete Math and Probability Theory, Linear Algebra, Computer Architecture, Operating Systems
- Astrophysics Courses (Tech GPA:3.3): Quantum Mechanics, Electromagnetism and Optics, Mechanics, Special Relativity, 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.
- 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* — August 2017 – Present

- Developing a CNN model that will classify supernovae candidates from telescope exposures to expedite the process of manually selecting them.
- Creating an automated data pipeline using Bash and Python that cleans, fits, and analyzes supernovae spectra features to extract data used in publications.

**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

**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.

**Iridium Satellite Receiver** — April 2018

- Created a Node backend service that accepts post requests from Iridium Satellite Network and parses the message to extract coordinates and sensor data into a MongoDB instance.

## Skills

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

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