

## Brian Zhao

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## Education

- **2013-2017 Cal Poly Pomona** 3801 West Temple Avenue Pomona, CA 91768
  - 4.0 GPA all quarters. Computer Science Major.
  - 2015 HackPoly participant, 2015 SoCal ACM participant, 2016-2017 CSS Club Co-President (ACM Chapter), 2016 Google CodeU Student

## Work Experience

- **Software Engineer Intern at NASA Jet Propulsion Laboratory** 1/2016 – Current
  - Built backend for a search-based document dashboard using Flask and Elasticsearch
  - Wrote Elasticsearch REST bulk indexing plugin for Apache Nutch (an open source webcrawler)
  - Implemented memory efficient fault tolerance and crash durability for internal search connector framework
  - Currently using Tensorflow's Inception model to train image recognition tagging system
- **Software Engineer Intern at Enthral Sports** 6/2015 – 9/2015
  - Backend web development with Play Framework, used Actor threads to facilitate asynchronous email system
  - Used Ebean ORM to help manage user login authentication system
  - Unit and Integration tests for web controller methods, and websocket connections
  - Wrote Bash Scripts for deploying to AWS servers, as well as various Cron jobs
- **Discrete Mathematics Facilitator / Recitation TA** 9/2014 – 12/2015
  - Helped tutor students with Formal Logic, Proof techniques, Set Theory, and Recurrence relations
- **TA for: CS331 Design and Analysis of Algorithms, CS141 Intro to OOP** 9/2015 – 12/2015
  - Implemented automated grading system for student programming assignments
- **High School Robotics Team Lead Programmer** 2012 – 2013
  - Developed an autonomous IR-source-seeking program for automated ring-delivery using RobotC
  - Team earned 7<sup>th</sup> place at CA Regionals in FTC (FIRST Tech Challenge)

## Academic/Personal Projects

- **Youtube Summarization Webservice**
  - Summarizes Youtube videos that have transcripts using TF-IDF scoring: <http://tldw.io>
- **SMS-Based Wikipedia/Google Lookup Android App**
  - Search Wikipedia and Google w/o using data. App sends answers back via SMS: <https://goo.gl/IHH9UE>
- **Similar Smartphone Suggestion Engine**
  - Crawled GSMArena to obtain data for building feature vectors of smartphones
  - Implemented K-Means Clustering algorithm to suggest phones with similar feature vectors
- **Reddit Post to Subreddit Classifier via Naïve Bayes and Rocchio**
  - Classifies Reddit posts to their origin subreddit based on word content of post title
- **Reddit Bot**
  - Replies to any comment containing “rekt” with a link to a list of burn centers in the United States
- **Steganographic Message Hider/Reader**
  - Hides 1 character of Ascii within each ARGB pixel of an image by modifying 2 lowest order bits

## Skills

- Programming Experience in: Java, Python, C++, C#, MIPS Assembly, Bash Scripting
- Familiarity with: Git, Linux, Play Framework, Flask, MySQL, JUnit, Android, Docker