

EDUCATION

University of California, Berkeley, Berkeley, CA 2016 – 2020

- B.S. in Electrical Engineering & Computer Science (EECS)
- Regents' & Chancellor's Scholar (UC Berkeley's most prestigious undergraduate scholarship)
- Highlighted Coursework: **courses currently taking*
 - Computer Programs (CS 61A) - Discrete Math & Probability Theory (CS 70) - Info Devices & Systems I/II (EE 16A/B)
 - Data Structures (CS 61B) - **Algorithms (CS 170)* - Linear Algebra & Diff Eqs (MATH 54)
 - **Computer Architecture (CS 61C)* - **Microeconomic Theory (ECON 101A)* - **Multivariable Calculus (MATH 53)*

Programming Languages: Python, Java, JavaScript, Solidity (Ethereum), HTML/CSS, PHP, SQL

Tools and Technologies: Git, WordPress, LaTeX, NumPy/SciPy

Languages: Mandarin Chinese (native fluency), Spanish (limited fluency)

EXPERIENCE

Blockchain at Berkeley – Software Developer 1/17 – present

- Work with companies to integrate blockchain technology by identifying use cases, building prototypes, and designing solutions
- Currently helping teach the Blockchain Fundamentals Decal (blockchain.berkeley.edu/decal/)
- Helped tackle problem in the pharmaceutical industry with verification, tracing, and identification of drugs through supply chain

UC Berkeley CS 61A/CS 61B – Academic Intern 1/17 – present

- Attend weekly labs and office hours to offer assistance with general coursework
- Help students with material and concepts (higher-order functions, data structures, tree recursion, asymptotics, etc.)

The Boeing Company – Advanced Technology/Software Programs Intern 6/15 – 8/15

- Wrote Python scripts and used cybersecurity tools for penetration testing and network analysis
- Simulated fiber optic telecommunications links and learned about implementing error correcting codes

FIRST Robotics Competition (#3473: Team Sprocket) – Programming Division Lead 8/13 – 6/16

- Designed and implemented robot code (i.e. sensors, vision, driving algorithms)
- Worked on developing and hosting web applications for the team (i.e. sign-in app, scouting app, parts inventory database)
- Worked extensively with the electrical team with debugging, wiring, and securing connections

PROJECTS

Provenance (Supply Chain) – brianho.io/provenance – Solidity, Javascript

- Built a general framework for a blockchain-based supply chain management interface that allows for item tracking/tracing
- Helped develop/debug Ethereum smart contract in Solidity and deploy web application using Truffle

BearMaps – brianho.io/bearmaps – Java

- Built a web mapping application using OpenStreetMaps that provides directions from point A to B (similar to Google Maps)
- Used QuadTree data structure for map rastering (zoom), A* algorithm for shortest paths calculations (route search), and tries for location autocomplete

TEDxYouth@DiamondBar Website – tedxyouthdiamondbar.com – HTML, CSS, JavaScript

- Built website for the TEDxYouth event using Twitter's Bootstrap Framework

Connotation Induced Technicolors (CIT) – brianho.io/connotation-induced-technicolors – Java

- Built a natural language processing service that analyzes the mood and semantics of the written word and renders a color spectrum based on the frequency of words/sentences detected that are positive, negative, or neutral
- Used Stanford CoreNLP API for sentiment analysis and generated HSV and RGB spectrums with own algorithms

AWARDS

Eagle Scout, Boy Scouts of America 2015

President's Volunteer Service Award, Corporation for National and Community Service 2015

14th of 2140, EasyCTF 2015

2nd Place, TeenHacks 2014

63rd of 3185, picoCTF 2014

National Semifinalist, Open Source Software Development at National TSA 2014