

EDUCATION

University of California, Berkeley, Berkeley, CA 2016 – 2020 (exp)

- B.S. in Electrical Engineering & Computer Science (EECS)
- Regents' & Chancellor's Scholar
- Relevant Coursework:
 - Computer Programs (CS 61A)
 - Data Structures (CS 61B)
 - Computer Architecture (CS 61C)
 - *Computer Security (CS 161)
 - Discrete Math & Probability Theory (CS 70)
 - Algorithms & CS Theory (CS 170)
 - Microeconomic Theory (ECON 101A)
 - *Artificial Intelligence (CS 188)
 - Info Devices & Systems I/II (EE 16A/B)
 - Linear Algebra & Diff Eqs (MATH 54)
 - Multivariable Calculus (MATH 53)
 - *Abstract Algebra (MATH 113)

** courses currently taking*

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

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

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

EXPERIENCE

Blockchain at Berkeley – Software Developer 1/17 – present

- Currently teaching the [Blockchain Fundamentals Decal](#) (CS 198) as a course instructor and content creator, covering: Bitcoin Mechanics, Ethereum & Smart Contracts, Cryptoeconomics & Game Theory, Alternate Consensus, Enterprise Blockchain
- Work with companies to integrate blockchain technology by identifying use cases, building prototypes, and designing solutions
- 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, graph traversals, tree recursion, asymptotics)

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, Truffle, 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 – [brianho.io/tedx youthdiamondbar](#) – 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 color spectrums