

# Zac Tang

(917) 678 9139 | [zt222@cornell.edu](mailto:zt222@cornell.edu) | <https://ztang813.github.io/Website/> | 350 W McKinley Ave #310, Sunnyvale, CA 94086

## EDUCATION

**Cornell University**, College of Engineering, New York, NY **Sep 2019 – Jan 2021**  
Master of Engineering in **Operations Research and Information Engineering**, **GPA: 3.88/4.0**

**New York University**, The Courant Institute of Mathematical Sciences, New York, NY **Sep 2015 – May 2019**  
B.A. in **Computer Science**, **GPA: 3.60/4.0**

- **Selected Coursework:** Software Engineering, Database Management, Operating Systems, Algorithms, Data Structures, Computer Security, Machine Learning, Neural Networks, NLP, Statistics, Big Data Analysis, Computer Architecture

## TECHNICAL SKILLS

- **Programming Languages:** Java (5 yrs), C/C++ (4 yrs), Python (4 yrs), Go
- **Web Development:** RESTful API, HTML, CSS, JavaScript, Bootstrap, React, Node, Express, Passport
- **Database:** SQL (PostgreSQL, MySQL), MongoDB
- **Cloud:** AWS, Azure

## EXPERIENCE & PROJECTS

**Project: Online Survey Platform**, *Cornell University*, New York City, NY **Winter 2021**  
**Highlights:** *Full-stack, MongoDB, Cloud, Node.js, React.js, Bootstrap, MapReduce*

- Built a **full-stack** online survey platform to format, customize and initiate survey questions
- Manipulated database using **MongoDB Atlas** cloud server, and synthesized data using **Map/Reduce** functions
- Handled backend HTTP responses using **Node.js**, **Express.js** and managed user credentials using **Passport.js**
- Utilized **React**, **Bootstrap** and open-source libraries to display information, and adapted UI to different devices

**Intern: Software Engineering** (Remote), *Symba Intern Management Platform*, San Francisco, CA **Summer 2020**  
**Highlights:** *Full-stack, Agile, Version Control, SQL, Cloud, AWS, Design, Node.js, React.js*

- Designed and built a **full-stack** dashboard-based management a web-based application
- Delivered new features and managed progress via **Agile** development practices and used **Git** for version control
- Implemented a match-making **algorithm** to connect students with hiring managers on a skill-based setting
- Developed **SQL** schemas, tables, relations, and deployed backend on **multiple AWS services** (RDS, S3, EC2)
- Constructed an efficient and interactive user interface using **React.js**

**Intern: Reinforcement Learning Research**, *Cornell University, UBS*, New York, NY **Fall 2020**  
**Highlights:** *Python, ML, Neural Nets, Object-Oriented Design, Papers, Visualization, Backtesting*

- Applied **reinforcement learning** (Q-learning and Neural Networks) to high frequency market data to maximize profits
- Developed hypothetical test data using different statistical models based on prior assumptions
- Streamlined **ML** algorithms such as Naïve Bayes, Decision Trees, KNN and Random Forests to analyze features
- Developed **visualizations** such as 3d-plots, heatmaps and animated plots for monthly presentations
- **Backtested** optimal strategy on real data after successfully creating profitable traders in the simulated environment

**Project: Coding Platform Problem Setting and Autograding**, *New York University*, New York, NY **Spring 2019**  
**Highlights:** *Linux, Docker, Algorithms, Server, Python*

- Developed algorithmic problems, test data, AC solutions and an automated grading script
- Created problem packages using Kattis problemtools, mounted files and scripts to **Docker** container, and set up server in a virtual **Linux** bash environment
- Automated repetitive process by designing input format validators and test generator scripts in **Python**

**Campus Job: Teaching Assistant**, *New York University and Cornell University*, NY **2017 – 2020**  
**Highlights:** *Java, Data Structures, Public Speaking, Individual*

- Prepared and led weekly recitations and office hours, explained **data structure**, **algorithm** concepts to 40+ students
- Achieved a perfect 5 out of 5 Teaching Assistant rating at Cornell University
- Conducted workshops on programming practices, debugging techniques and high-level algorithmic concept