# Brandon Lin

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#### Programming

- Python
- o Java
- LaTeX
- o HTML/CSS/JS
- Bash
- MATLAB
- PHP/Hack

#### Frameworks

- PyTorch
- o Flask
- OpenCV
- Scikit-learn
- o Node

#### **Applications**

- Git
- Mercurial

#### **Operating Systems**

- Ubuntu
- o Windows

#### Interests

- o ML/AI
- Rubik's Cube
- Music
- Origami

## Education

## University of Pennsylvania — School of Engineering & Applied Science Master of Science in Engineering (MSE) in Data Science

Philadelphia, PA May 2020

 Coursework: Advanced Deep Learning, Internet and Distributed Web Systems, Big Data Analytics Bachelor of Applied Science (BAS) in Computer Science

3.99/4.00 May 2020

- Minors: Statistics [Wharton] & Mathematics
- o Coursework: Algorithms, Database Systems, Computer Architecture, Abstract Algebra

#### Stuyvesant High School

New York, NY

Advanced New York State Regents Diploma

June 2016

o Honors: AP Scholar with Distinction

4.00/4.00

## Professional Experience

#### Facebook, Software Engineering Intern, Menlo Park, CA

May 2019 - present

o SWE Intern on Facebook's artificial intelligence infrastructure (FBLearner) team

## CIS 520 (Machine Learning), Teaching Assistant, Philadelphia, PA

January 2019 - May 2019

 Hold weekly recitations and office hours for teaching topics such as supervised/unsupervised learning. probabilistic graphical models and structured prediction

#### **Facebook**, Software Engineering Intern, Menlo Park, CA

May 2018 - August 2018

- o Provided foundation for Dynamic Ads team A/B test for new video ads format
- Fixed product recommendation duplication that increased efficiency and eliminated recommendation timeouts
- Created a Messenger-style internal bot that collects team member standups for accessible project transparency

#### CIS 160 (Discrete Mathematics), Teaching Assistant, Philadelphia, PA January 2018 - May 2019

- Work and help students to broaden understanding of discrete mathematics through recitations and office hours
- o Write, review, and grade homework problems in topics such as combinatorics, proof techniques and graph theory

### **Penn Labs**, PM, Dev Ops & Software Engineer, Philadelphia, PA

October 2016 - April 2018

- o Managed deployment and fixed Django bugs for Penn Course Review as part of semesterly data updates
- o Developed new features in Python for the API of the widely-used Penn Mobile app

# Projects & Research Experience

## Deep Learning in Machine Comprehension | brandonlin.com/cis700project.pdf

**April** 2019

- Machine learning research paper on improving deep architectures for cloze-style reading comprehension
- Used PyTorch to develop novel architectures using attention models for bidirectional LSTMs

#### The Steam Engine | brandonlin.com/steam.pdf

March 2018 - May 2018

- Machine learning research paper on applying collaborative filtering methods to Steam game recommendations
- o One of top 3 group research projects in UPenn's machine learning class (CIS 520 Spring 2018)
- Employed novel matrix factorization, neighborhood, and boosting models to accurately predict hours of play time

### Awards and Achievements

- 4-time Guinness World Record Holder for Square-1 Average (Rubik's Cube)
- USA Computing Olympiad Gold Division Qualifier
- YouTube Creator (8 years) w/ over 3000 subscribers
- William Lowell Putnam Competition Top 250 Finisher

# Leadership & Volunteer Experience

September 2017 - present

- Write programming competition questions that encourage student thinking in various algorithmic paradigms
- Assist in day-of operations including answering questions, selling apparel, and hosting awards ceremony

## World Cube Association, Competition Organizer, Various Locations

Philadelphia Classic, Competition Organizer, Philadelphia, PA

July 2011 - present

- Organized first speedcubing competition at Penn since 2009, attracting over 100 competitors worldwide
- Volunteered at over 20 regional competitions, leading competitor experience facilitation