

## EDUCATION

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**Columbia University**, New York, NY

M.S. in Computer Science, Machine Learning Track, GPA: 4.0/4.0

October 2019

B.A. in Computer Science, Foundations Track, GPA: 4.0/4.0

May 2017

### Awards and Honors

Graduated *summa cum laude*

May 2017

Awarded Computer Science Department cash prize for academic excellence

April 2017

Junior Phi Beta Kappa inductee

December 2016

## TECHNICAL SKILLS

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**Languages:** Python, Java, C, C++, Go, PHP, Scala, Javascript, HTML/CSS

**Development Tools:** Vim, IntelliJ, Sublime, Jupyter Notebook, PyCharm, Xcode, Eclipse

**Technologies:** SQL Server, Vertica, Kafka, Docker, Kubernetes, ZooKeeper, Splunk, S3

## EXPERIENCE

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### Citadel

September 2019 – Present

*Quant Developer - Commodities*

- Worked with commodities investment professionals, analysts, and quant researchers to build out the software for the Financial Transmission Rights (FTRs) trading desk.
- Developed software in Python for fundamental analysis and modeling of the US electrical power grid.
- Designed the data pipeline (SQL Server, Kafka, S3) and created visualizations (Python Flask + Plotly Dash).
- Responsible for the core libraries used to optimally invest tens of millions of dollars in FTRs annually.

### Xandr

July 2017 – August 2019

*Software Engineer - Optimization*

- Led development of budgeting and valuation mechanisms for Xandr's demand-side platform.
- Developed machine learning applications for post-click and post-view cost-per-acquisition (CPA) optimization.
- Scaled Python and Java streaming applications to optimize millions of dollars of daily ad spend.
- Improved and maintained the real-time programmatic advertising infrastructure written in C.

### Department of Computer Science, Columbia University

January – May 2017

*Teaching Assistant*

- TA for Analysis of Algorithms I, an introduction to the design and analysis of efficient algorithms.
- Held office hours, helped students with homework via Piazza, graded assignments, and proctored exams.

### AppNexus

May – August 2016

*Software Engineering Intern*

- Created a standalone Scala application that automated a time-consuming data recovery process.
- Improved the data platform's job scheduler by creating the API for ad hoc job processing.

## PROJECTS

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### Approximate Near Neighbor Search under L-infinity

March - May 2019

- Final project on data structures for approximate near neighbor search in L-infinity normed spaces.
- Proposed two original data structures for this problem that have good space/time bounds in low-dimensions.

### Deep Learning for Network Traffic Classification

October - December 2018

- Predicted Server Name Identification (SNI) from HTTPS features using deep learning.
- Compared performance of Random Forest, CNN, RNN, and Ensemble Methods.

### 2-Way k-Means: A Model for Microbiome Samples

September 2016 - August 2017

- Clustering research with Professor Itsik Pe'er for the Human Microbiome Project.
- Paper presentation at KDD 2017 and published in the Journal of Healthcare Engineering, vol. 2017.

## PUBLICATIONS

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- Weston J. Jackson, Ipsita Agarwal, and Itsik Pe'er. "2-Way k-Means as a Model for Microbiome Samples." *Journal of Healthcare Engineering*, vol. 2017, Article ID 5284145, 7 pages, 2017. doi:10.1155/2017/5284145.