

Frederick Robinson

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Employment

- 2017-2022 **Senior Applied Scientist**, *Amazon AWS - Interactive Video Service*, Twitch.
- Mentored other applied scientists, leading to one being promoted.
 - Designed, and productionized realtime machine learning model to optimize data center selection for video playback, reducing global video buffering rates by >1%.
 - Launched new machine learning service for predicting optimal video player settings.
 - Created streaming fraud detection machine learning system, improving fraud detection by more than 75% for problematic channels.
 - Implemented first mathematical-model based method for transcode server configuration, improving server hardware utilization by >5%.
 - Wrote production golang code for backend service serving >50k RPS.
- 2014-2017 **Software Engineer**, *Google, Inc. - Display Ads*, Remarketing Quality.
- Developed end-to-end real-time bidding system calibrated by offline auction simulation.
 - Built models to optimized advertiser ROI by learning advertiser-specific bidding strategies.
 - Implemented offline MapReduce-based training pipeline.
 - Wrote and maintained production pipeline and monitoring.
 - Enabled additional traffic expansion worth tens of millions in incremental annual revenue.
 - Trained models to improve CTR on multi-product ads.
- 2012-2014 **Teaching Assistant**, *University of California, Los Angeles*.

Skills

Skills Machine Learning, Data Science, Data Engineering
Languages Golang, Python, C++

Education

- 2014 **Master of Arts in Mathematics**, *University of California Los Angeles*.
- 2012 **Bachelor of Arts in Mathematics with Honors**, *Northwestern University*.