

# Edward Gan

edgan8@gmail.com

edgan8.github.io

## Education

- **Stanford University** Stanford, CA  
*PhD Student, Computer Science* 2015 - Present
  - Research with Prof. Peter Bailis on scalable machine learning and statistics
- **Stanford University** Stanford, CA  
*M.S. in Computer Science, GPA 4.1/4.0* Sep 2017
- **Harvard University** Cambridge, MA  
*A.B. Summa Cum Laude in Computer Science and Mathematics* May 2013

## Experience

- **Airbnb** San Francisco, CA  
*Price Modeling Engineering Intern* Summer 2016
  - Developed calibrated models in Spark to target users for customized price suggestions
  - Targeted suggestions achieved 20% conversion rate over tens of thousands of hosts
- **Facebook** Menlo Park, CA  
*Software Engineer, Data Tools + Ads Data Targeting* 2013 - 2015
  - Designed and built an execution engine and UI for backfilling data pipelines
  - Developed remediation and monitoring systems for dynamic product ads
- **Microsoft** Redmond, WA  
*Software Development Engineer Intern, Windows* Summer 2011

## Selected Publications

- **Moment-Based Quantile Sketches for efficient ... Aggregation Queries** SysML, VLDB  
*Edward Gan, Jialin Ding, Kai Sheng Tai, Vatsal Sharan, Peter Bailis* Aug 2018
  - Efficient distributed quantile estimation using data sketches and a maximum entropy model.
- **Scalable Kernel Density Classification via Threshold-Based Pruning** ACM SIGMOD  
*Edward Gan, Peter Bailis* May 2017
  - Unsupervised non-parametric anomaly classification, outperforms scikit-learn.
- **MacroBase: Prioritizing Attention in Fast Data** ACM SIGMOD  
*P. Bailis, E. Gan, S. Madden, D. Narayanan, K. Rong, S. Suri* May 2017
  - Combinatorial feature selection for anomaly detection, in-use internally at Microsoft.
- **Expanding mutually exclusive clusters of users of ...** Patent Pending US20170024455A1  
*S. Powell, B. Arnoux, S. Hong, D. Chapsky, E. Gan, et al* July 2015
- **Type Classes for Lightweight Substructural Types** International Workshop on Linearity  
*Edward Gan, Jesse Tov, Greg Morrisett* July 2014
  - Guaranteeing safe usage of stateful objects through programming language design.

## Skills + Awards

- Proficient with Python and Java. Familiar with PyTorch, Spark, R, and C++.
- NSF Graduate Research Fellowship 2015-2020. International Physics Olympiad Gold Medalist 2008.