Frederick Robinson

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Employment

2014-Present — **Software Engineer**, *Google, Inc. - Display Ads*, Remarketing Quality.
- End to end development of a real-time bidding system calibrated by offline auction simulation algorithm
- Built models to optimize advertiser ROI by learning advertiser-specific bidding strategies.
- Implemented offline mapreduce based training pipeline.
- Analyzed results using SQL queries over logs data.
- Wrote and maintained production pipeline and monitoring.
- Enabled additional traffic expansion worth tens of millions in additional yearly revenue.

2012-2014 — **Teaching Assistant**, *University of California, Los Angeles*.
Conducted recitations for undergraduate classes - Calculus, Differential Equations, C++

2010 — **Physics Programming**, *Northwestern University*.
Simulated gravitational waves from intermediate mass ratio inspiral using C and GNU Scientific Library

Education

2014 — **Master of Arts in Mathematics**, *University of California Los Angeles*.

2012 — **Bachelor of Arts in Mathematics with Honors**, *Northwestern University*.

Robert R. Welland Prize for Outstanding Achievement in Mathematics by a Graduating Senior

Honors thesis on *Persistent Homology* under David Nadler

Skills

Languages — Python, C++, Go, Mathematica
Technologies — Mapreduce, Flume, Dremel SQL
Skills — Machine Learning, Data Pipelines

Research Experience

2011 — **Indiana University Research Program**, *NSF funded project investigating phylogenetics with Prof. E Housworth*.

2010 — **Number Theory Research**, *Researched cyclotomic integers under Prof. F. Calegari funded by NSF grant*.

2010 — **Discrete and Continuous Geometry**, *Selected for and attended two week research conference at Northwestern University*.

Publications

Frederick Robinson and Michael Wurtz. On the magnitudes of some small cyclotomic integers. *Acta Arithmetica*, 160(4):317–32, 2013.