ALEX P. MILLER
CURRICULUM VITAE

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EDUCATION

The Wharton School, University of Pennsylvania Philadelphia, PA
Doctoral Candidate, Operations, Information, & Decisions 2015 – Present
Concentration: Information Systems

Clark Honors College, University of Oregon Eugene, OR
Bachelor of Arts, Mathematics, *summa cum laude*, ΦBK 2008-2012
Cumulative GPA: 4.02 (3.95 without counting A+)

HONORS & AWARDS

- *Oregon Six* (2012) - Designated by Oregon's Phi Beta Kappa chapter as one of the top six (of 4,500) graduating students in the class of 2012.
- *Undergraduate Research Fellowship* (2012) - Awarded to three University of Oregon students each year for advanced undergraduate research projects.
- *Curtis Scholarship* (2011) - Departmental award for outstanding achievement in mathematics by a continuing student.
- *Stevenson Prize* (2012) - Departmental award for senior in mathematics with interest in teaching.
- *Distinguished Honors Research Thesis Defense* (2012) - Awarded for theses that are clearly in top 10% and comparable to competent graduate work
- *Departmental Honors* (2012)

RESEARCH

November 2013 *On Godwin's Law: A Statistical Analysis on the Distribution of Nazi Analogies in Online Discussion*
A personal project employing large-scale web-scraping and data processing in Python and R. Available at http://miller.im/godwinslaw.pdf.

June 2012 *Generalized Multivariable Alexander Invariants for Virtual Knots & Links*
Undergraduate honors research thesis. Passed with distinction (highest award). Available at http://miller.im/thesis.pdf.

INDUSTRY EXPERIENCE

04/2014–08/2015 *Full Stack Developer, Data Scientist*
1.5 yrs.   SmartyPal, Philadelphia, PA
Principal backend developer and data scientist at ed-tech startup.

- Co-authored successful Small Business Innovation Research grant from the National Science Foundation, resulting in nearly $900,000 of non-dilutive funding to the company

- Developed and engineered logic for personalized adaptive learning platform based on item response theory and multi-armed bandit techniques

- Designed and programmed entire server-side API including data collection, storage, and processing (in Linux, PHP, Python, R)

- Made substantial contributions to fundraising, design, and marketing efforts including digital ad management and web analytics.

10/2012–04/2014 *Digital Marketing Specialist*
1.5 yrs.   Adpearance, Portland, OR (by telecommute)
Primary analytics, A/B testing, and search engine optimization specialist.

- Initiated, developed, and managed two core service offerings–A/B testing and Automotive SEO–the latter of which received certification from Chrysler LLC's digital digital marketing program

- Developed an automated JavaScript-based page generator for Auto SEO service

- Added novel keyword research method, semantic markup, enhanced analytics tracking, and site speed optimization to SEO services

PROGRAMMING SKILLS

Computing: Python, R, MongoDB, SQL, Mathematica, Sage, Linux
Markup: HTML/CSS/JavaScript, LaTeX