DANIEL MILLER

402.512.4475 | daniel.keegan.miller@cornell.edu | linkedin.com/in/daniel-miller/

Summary

Math Ph.D. candidate, also working on a M.S. in Computer Science. Have experience developing algorithms in a group setting, visualizing complex data, and communicating ideas to a diverse audience. Led the creation of a scalable, distributed, cloud-hosted website, and looking for positions that involve leveraging mathematical techniques to understand real-world data sets in a fast-paced environment

Education

Ph.D. in Mathematics, Cornell University *August 2012–May 2017*

- Won the Eleanor Norton York Award for excellent collaboration and rapid research progress.

M.S. in Computer Science, Cornell University *August 2015–May 2017*

- Managed the creation of a location-centric auction site written in C# and hosted on Azure.
- Achieved 10ms response rate at up to 2K requests per second.
- Collaborated in writing a CPU scheduler and gossip-based networking protocol in C.

B.S. in Mathematics, University of Nebraska Omaha *August 2009–August 2012*

- Minored in Computer Science, graduated *summa cum laude*, GPA 4.0.
- Dean's List all semesters, Highest Honors in Mathematics, with senior thesis.
- Designed and wrote a compiler for a C-family programming language in Standard ML.

Research

Ph.D. Research, Cornell University *August 2013–May 2017*

- Developed and implemented new multidimensional techniques for computing fitness of large data sets.
- Found mathematical application of previously unused techniques for numerical integration.
- Proved precise connections between apparently unconnected topics (discrepancy and Dirichlet series).
- Demonstrated computability of "torsion classes," a highly abstract theoretical construct.

Arizona Winter School, University of Arizona *May 2014, May 2016*

- Mastered concepts, ran simulations, and proved theorems in a high-intensity one week program.
- Collaborated with a diverse team to develop and present new mathematics quickly.

Summer Mathematics Institute, Cornell University *Summer 2011*

- Created and visualized a high-dimensional example that disproved a conjecture.
- Coauthored *Strongly non-embeddable metric spaces*. Topology Appl. **159** (2012), no.3, 749–755.
- Coauthored *Polygonal equalities and virtual degeneracy in L_p spaces*. J. Math. Anal. Appl. **415** (2014), no.1, 247–268.

Leadership

Teaching Assistant, *Cornell University*. Coordinated logistics, teaching, and grading for a course with 300 students and 12 faculty. Assisted in teaching mathematics at undergraduate and graduate levels.

Resident Assistant, *Chesterton House*. Directed event-planning, recruitment, and finances for an academic living center.

Skills

Programming: C#, Python, Java, ASP.NET, C, Sage, and LaTeX.

Web: Azure, Amazon Web Services, HTML, and Google's Material Design Lite.