

Daniel Miller

MATHEMATICIAN — DATA SCIENTIST

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Summary

I'm a math Ph.D. student who works on the statistics of large data sets coming from number theory.

Education

Cornell University

PH.D. IN MATHEMATICS

Ithaca, NY

August 2012–May 2017

- Oversaw logistics and planning for a course with 300 students.
- Taught classes at undergraduate and graduate levels.
- Relevant courses: Smooth Manifolds, Algebraic Topology, Real Analysis, and Algebraic Groups.
- Won the Eleanor Norton York Award on the basis of my achievements.

Cornell University

MASTER'S IN COMPUTER SCIENCE

Ithaca, NY

August 2015–May 2017

- Created a distributed, cloud-based, location-based auction site, and tested it for scalability.
- Relevant courses: Cloud Computing, Distributed Computing, Operating Systems.

University of Nebraska Omaha

B.S. IN MATHEMATICS

Omaha, NE

August 2009–August 2012

- Minor in Computer Science, graduated *summa cum laude*, with Highest Honors in Mathematics.
- Relevant courses: Database management systems, Data structures, Functional programming

Research Experience

Computational statistics of elliptic curves

CORNELL UNIVERSITY (PHD)

August 2015–May 2017

- I am developing new techniques for computing the G -star discrepancy of large sequences. Also, I have proved precise connections between the discrepancy of a sequence and the analytic properties of an associated L -function. Finally, I have modernized the traditional foundations of Galois deformation theory.

Summer Mathematics Institute

CORNELL UNIVERSITY (UNDERGRADUATE)

Summer 2011

- With A. Weston, C. Kelleher, and T. Osborn, created a complex new example that disproved a long-standing conjecture.
- *Strongly non-embeddable metric spaces*. Topology Appl. **159** (2012), no.3, 749–755.
- *Polygonal equalities and virtual degeneracy in L_p spaces*. J. Math. Anal. Appl. **415** (2014), no.1, 247–268.

Arizona Winter School

UNIVERSITY OF ARIZONA

May 2016

- Formulated a version of the Lang–Trotter conjecture for a new class of objects and provided strong numerical evidence.

Fund for Undergraduate Scholarly Experiences

UNIVERSITY OF NEBRASKA OMAHA

Summer 2012

- Created a simpler and more robust approach to a recent and important theorem in Hopf–Galois theory.

Skills and Activities

Programming: C#, Java, Python, C, and \TeX .

Resident Assistant

CHESTERTON HOUSE

Ithaca, NY

August 2013–May 2014

- Coordinated events, finances, and recruiting for a living center.