Atticus Christensen

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Personal

I am a graduating math PhD seeking to apply analytical skills from my PhD to challenging problems in data science, machine learning, and application of algorithms. My PhD research focused on the mathematical areas of number theory and algebraic geometry. My papers have applications to generalizations of elliptic curves over finite fields, objects which underpin elliptic curve cryptography.

Education

Massachusetts Institute of Technology

Ph.D. in Mathematics. 5.0/5 GPA   *Sept 2015 - May 2020*

Stanford University

B.S. in Mathematics. 3.973/4 GPA   *Sept 2011 - June 2015*

Technical Skills

Languages

Python, SQL, Ruby on Rails, Java, HTML/CSS, Matlab, C++, C, Mathematica, Sage

Tools

TensorFlow, Keras, git, GitHub, bash, LaTeX, GNU/Linux

Work Experience

Research Assistant

Massachusetts Institute of Technology   *Sept 2015 - present*

- Completed two independent research projects in mathematics using cutting edge techniques
- Tested mathematical hypotheses computationally in Sage
- Organized seminars on seminal and contemporary research
- Presented at research seminars and conferences

Teaching Assistant

Massachusetts Institute of Technology   *Sept 2015 - present*

- Taught recitations, prepared worksheets, and held office hours
- Focused on understanding students' difficulties and tailored instruction towards those areas
- Received excellent teaching evaluations

Mentoring

Massachusetts Institute of Technology

- Mentored two undergraduate students' research projects; each successfully completed their project and is working towards publishing the result
- Mentored two high school students in advanced mathematics; one went on to do research in the field

Publications

A Topology on Points on Stacks

Submitted for publication. Preprint at `https://math.mit.edu/~atticusc/topstacks.pdf`

Specialization of Néron-Severi Groups in Characteristic p

Submitted for publication. Preprint at `https://arxiv.org/abs/1810.06550`

Notable Courses

Computer Science

Stanford: Methodology (106a), Abstractions (106b), Systems (107), Algorithms (161), Cyptography (255 and 355) *Coursera*: Machine Learning, Neural Networks and Deep Learning, Improving Deep Neural Networks, Convolutional Neural Networks, Sequence Models

Mathematics

Measure Theory, Number Theory (elliptic curves and abelian varieties), Linear Algebra, Modal Logic

Languages

English: native **Italian:** fluent **French:** proficient