Sai Sivakumar

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Goals

Currently seeking to obtain a B.Sc. in mathematics, then to earn a Ph.D in mathematics with a currently unknown specialization. I am also seeking minors in computer science and in physics.

Education

August 2020 - present: Working on B.Sc. in Mathematics with a 3.97 GPA currently, University of Florida (UF).

August 2016 - June 2020: Graduated with IB diploma with a 4.00 GPA, Stanton College Preparatory High School.

Research

[none]

Publications, Talks/Presentations

June 2021: Discussed the integral definition of the inverse Laplace transform, as well as how to compute the integral using the residue theorem, at an elementary level. (YouTube)

March 2021: Gave a talk on proving the fundamental theorem of calculus at a highschool/pre-real analysis level. (YouTube)

Experience

Expected August 2021 - December 2021: Exam proctoring and grading position for MAP2302 Elementary Differential Equations.

Skills

2+ years of LATEX experience (high proficiency).

Basic proficiency in Java, C++, expecting to have experience in Python and MATLAB.

Presently working on some neural network basics using Python with guidance from Daniel Wilczak (github.com/danielwilczak101).

Outreach/Service

August 2021 - May 2022: To-be Academic Director of the University Math Society at UF.

May 2021 - present: Transcribing via LATEX notes from my introductory courses in abstract algebra and complex analysis to be shared with early undergraduates.

March 2021 - present: Moderator for a large online community (exceeding 40,000 members globally) which seeks to stimulate mathematical discussion and interest, as well as to provide assistance with math problems/concepts.

August 2020 - present: Administrator for an online community for mathematics students at UF to discuss mathematics in (created in response to the Covid–19 pandemic).

August 2020 - December 2020: Helped write and type up several solutions for Concepts in Calculus III by Miklos Bona and Sergei Shabanov (around 47 pages or so, working with two others to form in total 141 pages of solutions compiled in a solution manual).

August 2019 - February 2020: Started a small unofficial mathematics club (in highschool) where students presented on topics of mathematical interest; there I gave two or three informal talks.

Honors/Awards

2020 National Merit Scholarship Commended

2020 National AP Scholar

Relevant Coursework

From most recent to earliest, where items marked with a * are expected to take place in the next semester(s), and items marked with a † are graduate or mixed graduate/undergraduate level courses:

MAA4211*: Advanced Calculus – Two semesters of introductory real analysis. Using Abbott, chapters X.

MAS4115*: Fourier Analysis - One semester of

 $MAT4930^{*\dagger}$: Algebra – One semester of (as a special topics course)

MAP4305: Ordinary Differential Equations – One semester of

MAA4402: Introductory Complex Analysis – One semester of

MAS4105: Introductory Linear Algebra – One semester of

MAS4203: Introductory Number Theory – One semester of

MAS4301: Introductory Abstract Algebra – One semester of

MAC3474: Honors Calculus III – One semester of

MAP2302: Honors Elementary Differential Equations – One semester of

MHF3202: Sets and Logic - One semester of