

Natnael Mulat

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EDUCATION

Davidson College

BSc in Computer Science and Economics (Double Major)

Overall GPA: 3.9, *Magna cum laude*

Davidson, NC

May 2022

- Relevant Coursework: Discrete Structures, Real Analysis, Numerical Analysis, Probability, Game Theory, Mas-Colell Whinston Green Microeconomics, Data Structures, Analysis of Algorithms, Machine Learning, Recommender Systems

Post-Baccalaureate

Overall Grade: A

Cambridge, MA

June 2023 - Present

- Relevant Graduate Coursework: Math-156: Mathematical Statistics, MIT 14.661: Labor Economics I, MIT 14.382: Econometrics, MIT 14.163: Algorithms and Behavioral Science.

RESEARCH EXPERIENCE

MIT Blueprint Labs

Senior Research Fellow

PIs: Atila Abdulkadiroğlu, Glenn Ellison, Parag A. Pathak, and Christopher R. Walters

Cambridge, MA

Aug 2022 - Present

- Conducting analysis to assess the impact of changes in assignment algorithms and resource allocation policies in NYC public schools.
- Assessing the effects of attending Boston Exam Schools on student outcomes.
- Utilizing Stata and Matlab to conduct data analysis for weekly research meetings.
- Drafting research proposals for administrative data requests and preparing policy briefs for data providers.

Davidson College, Economics Department

Independent Researcher

Advisor: Mark Foley

Davidson, NC

May 2021 - April 2022

- Researched the impact of delayed graduation on wages using the NLSY97 dataset.
- Developed variables in Stata to quantify gaps in enrollment status.
- Investigated potential instrumental variables to enhance the analysis.
- Prepared poster and presented at Summer Research Symposium at Davidson College.

Davidson College, Economics Department

Researcher

Advisor: Vikram Kumar

Athens, Greece

May 2020 - Oct 2020

- Conducted investigative research to find out the long-term effect of Greece's financial crisis.
- Designed pointed survey questions to determine the relationship between the crisis and current trends.
- Interviewed 15 Greece University students via Zoom and Google Meet to record their experience.
- Analyzed and summarized reports from interviewees, highlighting the ongoing impact of the crisis.

ADDITIONAL EXPERIENCE

Davidson College, Economics Department

Econometrics Teaching Assistant

Davidson, NC

Aug 2021 - May 2022

- Instruct biweekly lab sessions to teach Econometrics students the fundamentals of programming in Stata.
- Host biweekly office hours and one-on-one appointments for students to ask questions regarding course content.
- Work closely with Dr. Mark Foley to counsel students on the process and feasibility of empirical research.

Davidson College, Economics Department

Introductory Economics Embedded Tutor

Davidson, NC

Aug 2020 - Dec 2021

- Hosted office hours and one-on-one appointments for students to address questions regarding course content.
- Held additional office hour sessions during reviews and projects that required extra support.
- Collaborated closely with Dr. Vikram Kumar to ensure sessions aligned with the learning goals of the course.

Residence Life Office (RLO)

Hall Counselor (Resident Assistant)

Davidson, NC

Jun 2021 - May 2022

- Collaborated with a team of 18 to oversee a residence hall housing 350 first-year students.
- Offered personalized support through scheduled one-on-one sessions to facilitate students' transition to college.
- Organized and implemented programs and activities to engage students and foster a supportive community.
- Served as a first responder for emergencies throughout the academic year, ensuring student safety and well-being.

Tresata

Charlotte, NC

Data Engineer Intern

Jun 2021 – Aug 2021

- Collected datasets that are useful in evaluating a companies' ESG evaluations.
- Managed, profiled, cleaned, and uploaded datasets to Amazon S3 and EMR clusters using HDFS.
- Processed and visualized data using Scala, Spark, Python, and SQL scripts using Vim on Linux system.

Davidson College, Project PRONTO++

Davidson, NC

Software Developer

Aug 2019 – Feb 2020

- Integrated MERN stack to develop a website that can facilitate the process of applying to gigs.
- Created and maintained a MongoDB database to keep track of students', staffs', and clients' information.
- Utilized GitHub to integrate contributions with teammates effectively.

VOLUNTEER WORK

Young Women's Christian Association (YWCA)

Addis Ababa, Ethiopia

Mathematics Tutor

Jan 2020 – May 2023

- Provided class sessions in mathematics to middle school students to improve their foundational skills.
- Developed tailored learning materials and exercises facilitating significant improvement in their performance.
- Organized and led group study sessions, fostering a collaborative learning environment.

AWARDS AND HONORS

Alvarez Scholar

Aug 2018 – May 2022

Full-tuition awarded for outstanding international students through the Alvarez family-endowed scholarship.

Kemp Research Scholar

May 2020 – May 2021

Bank of America Kemp Research grant for independent research, with support of \$7,000.

Davidson Research Initiative Researcher

May 2021 – March 2022

Davidson College summer fellowship for a faculty-mentored research with a stipend amounting to \$5000.

Weinstein Travel Grant Recipient

Dec 2021 – Jan 2022

Received the Weinstein Travel Grant for immersive cultural exploration across the U.S. amounting to \$2,000 .

Hall Counselor of the Month

Feb 2022

Honored for exceptional service and dedication to supporting first-year students' adjustment to college life.

Inductee of Omicron Delta Epsilon

May 2022

Inducted into the international economics honor society in recognition of outstanding academic achievement.

RESEARCH SUPPORTED

1. Atila Abdulkadiroğlu, Parag A. Pathak, and Christopher R. Walters. "Who Gets What May Not Matter: Understanding School Match Effects." *In progress*.
2. Glenn Ellison and Parag A. Pathak. "Optimal School System and Curriculum Design: Theory and Evidence." *Draft Submitted*. November, 2024.
3. Parag A. Pathak. "School Assignment Reforms vs. Changing What's Assigned." *Presentation at SAQ Fellowship, MIT Blueprint Labs*, September 27, 2024.
4. Parag A. Pathak. "Market Design for Education." In *New Directions in Market Design*, University of Chicago Press, May 2023. NBER.

SKILLS

- **Programming Languages:** Proficient in **Stata** (statistical analysis, econometrics), **Python** (data analysis, machine learning, recommender systems, Scikit-learn), **Matlab** (numerical computing, simulations), **LaTeX** (document preparation), **Scala** (big data with Apache Spark), **Java** (object-oriented programming), **C** (systems programming), **JavaScript** (web development with React).
- **Computer Skills:** Proficient in **Microsoft Office** (advanced Excel, VBA, PowerPoint design), **GitHub** (version control, collaboration).
- **Languages:** Fluent in **English** and **Amharic**.