

# THOMAS DAILLAK

| tdaillak@mit.edu |

## EDUCATION

### Massachusetts Institute of Technology

- Master's in Operations Research, expected to graduate in Spring 2026
- Advised by Professor Swati Gupta

### Swarthmore College- Class of 2022

GPA: 3.95/4.0

- Bachelor's of Arts in Mathematics major with minors in Economics and Linguistics
- Graduated with High Honors, Phi Beta Kappa

### Byram Hills High School- Class of 2017

## RESEARCH EXPERIENCE

### MIT Operations Research Center

August 2024-Present

Research Assistant (Advisor: Dr. Swati Gupta)

- Equitable and efficient algorithms for applications in healthcare

### Swarthmore College Statistics Department

Summer 2021

Researcher (Advisor: Dr. Amanda Luby)

- Analyzed underexploited data on fingerprint examiners' decision making process
- Developed methods for clustering of marked minutiae and applications of Item Response Theory without an answer key to spatial data
- Gained experience designing hierarchical Bayesian models and implementing them in Stan

### Centre for Integrative Biology, University of Trento

Summer 2016

Researcher (Advisor: Dr. Giovanni Stefani)

- Designed and tested novel laboratory protocols for the study of the brain cancer Glioblastoma Multiforme

## WORK EXPERIENCE

### Senior Analyst, Analysis Group

May 2022 - Present

- Involved in the antitrust litigation practice with a focus on mergers and acquisitions, particularly in the health care space
- Responsible for work ranging from data cleaning to share and diversion ratio estimation to assistance drafting reports and the construction of graphics and interactive data dashboards depending on client needs
- Worked with US Census microdata and public and private health insurance claims data

### Policy intern, The Movement Advancement Project

2020-2021 Academic Year

- Partnered with national charities to create content for educational and lobbying purposes in forms varying from blog posts to presentations and full length reports
- Collected and analyzed data on social service providers throughout the US to inform the discussion of equitable access and government policy
- Researched state and federal law to identify strategic targets for clients and partner agencies looking to take political action

### Resident assistant, Swarthmore College

2019-2020 Academic Year (returning Fall 2021)

- One month of training in mediation, crisis response, and intervention
- Organized community events with attendance ranging from 15 to 150 people

### Summer intern, Lebonson Actuarial Services

Summer 2017 and 2018

- Managed an overhaul of company-wide billing procedures, including the design of new profitability and productivity reporting structures and the training of employees

## WORK EXPERIENCE

### **R Trainer, Analysis Group**

*Summer 2023*

- Led two cohorts of 10 new hires each through a month long bootcamp focused on developing coding and statistical skills in R

### **Math clinician, Swarthmore College**

*Spring 2020 + 2020-2021 Academic Year*

- Led weekly 3 hour help sessions for students first in multivariate calculus and later in a similar role for all courses offered in the department
- Helped students of varying levels, individually and in groups, understand course material

### **Grader, Swarthmore College**

*2019-2020 + 2021-2022 Academic Years*

- Responsible for grading and providing feedback for 15-20 students in upper level modern algebra and theoretical probability courses

## PUBLICATIONS

Luby, A., **Daillak, T.**, Huang, S. "Analyzing Spatial Responses: A Comparison of IRT-Based Approaches," *Quantitative Psychology*, March 2023

## PRESENTATIONS

**Daillak, T.** "Clustering Techniques for Analyzing Fingerprint Minutiae Labels," *Swarthmore Summer Research Showcase Fall 2022* (oral)

## AWARDS

### **Heinrich W. Brinkmann Prize**

*2022*

- Awarded to a student who has shown outstanding performance in the field and exemplary services to the Swarthmore Mathematics Department

### **Swarthmore College Summer Research Funding**

*Summer 2021*

- Sponsored funding for participation in undergraduate research

## LEADERSHIP

- Served on the Analyst Recruiting Committee at Analysis Group, which is responsible for interviewing and selecting all analyst and summer intern hires
- Served on advisory committees throughout undergraduate education, including the Math/Stat Student Advisory Council, the COVID-19 Student Life Continuity Committee, the Title IX Policy Revision Committee, and the Library Advisory Board

## SKILL PROFILE

- **Programs:** Python, R, STATA, SAS, MATLAB, Microsoft Suite, LaTeX, AMPL
- **Languages:** Highly proficient in Italian, proficient in Spanish, basic competency in modern standard Arabic and Mandarin