

Matthew Shu

☎ 301-803-0096 • ✉ matthew.shu@yale.edu • 🌐 www.matthewshu.com
👤 Nonameentered • in [linkedin.com/in/mattshu/](https://www.linkedin.com/in/mattshu/) • 📍 Olney, MD

Education

Yale University: Statistics & Data Science and Sociology 2021 - Expected 2025

Montgomery Blair High School: Science, Math, and Computer Science Magnet Program 2016 - 2020

Relevant Courses: Data Structures, Analysis of Algorithms, Linear Algebra, Discrete, Multivariable Calculus, Differential Equations, Educational Statistics, Data Exploration & Analysis, YData: Measuring Culture, Software Design, Introduction to AI

Work Experience

Research Intern, under Prof. Brad Myers and Amber Horvath **React.JS, User Studies**
Human-Computer Interaction Institute - Carnegie Mellon University June 2022 - Present

- Working to improve tools for surfacing relevant notes for programmers in Visual Studio Code: planned, CHI 2023

Teaching Assistant, CS50: Intro to Computer Science **Python, C, Teaching**
Yale University May 2022 - Present

- Will help students in office hours and co-teach small cohort of students supplementary concepts and lectures in Fall 2022

Research Intern, under Prof. Jordan Boyd-Graber and Shi Feng **NLP, Python, Vue.JS, SQL, Docker**
University of Maryland at College Park January 2019 - Present

- Developing AWS-deployed [KAR³L Flashcards](#) AI app to better long-term learning: EACL HCI+NLP 2021 Workshop, CHI 2023 (Planned)
- Investigated bias in question answering systems with ambiguity: [paper](#), EMNLP 2021 Workshop, EMNLP 2023 (Update In Submission)
- Coordinated 2021 [QANTA](#) question answering dataset update

iOS Developer, Business Partnership Co-Founder **Swift, Fastlane, Software Engineering**
Technaplex June 2018 - Present

- Individually created [Flashcard Adder](#), a custom interface and action extension for creating AnkiMobile flashcards with ~1000 downloads
- Co-developed and coordinated creation of [QuizDB for iOS](#), a quizbowl question database with over 5K downloads

Curriculum Writer, Analysis of Equity in STEM **Sociology of Education, Teaching**
Montgomery Blair High School January 2021 - August 2021

- Created course outline and lessons (e.g., bias in AI), first taught Spring 2022, inspired by my experience as a low-income STEM student

Projects

The Evolution of Country Music **Computational Social Science, RMarkdown, Jupyter Notebook**
Country Music Subgenres Across Gender and Time Spring 2022

- Created largest dataset (5K+) of full country music lyrics & metadata, analyzed with structural topic models and other NLP methods.

Mindful.ly **Swift, Firebase**
Promoting Conscientious Work and Play Fall 2020

- Formulated idea, led development for simplified time tracker: [IvyHacks 2020](#) Best Remote Education and Work Hack out of 169 projects

Maskif.ai **Swift, AVFoundation**
Masks are the Key for Entry Fall 2020

- Developed iOS client for smart lock app using computer vision to detect mask-wearing: [YHack V. 2020](#) Overall Prize out of 41 projects

Activities & Leadership

Splash at Yale **Teaching, Logistics**
Splash Spring 2022 Director, Class Teacher September 2021 - Present

- One of two directors for Splash Spring 2022, where Yale students teach a one day class about their interests to 7-12th grade students

Yale Negative Space Asian American Oral History Project **Interviewing, Logistics**
Co-President, Editing Lead September 2020 - Present

- Coordinating training, interviews, and events since Fall 2021. Edited and published all twelve Fall 2020 and Spring 2021 interviews.

Yale Machine Learning **PyTorch, Teaching**
Club Board Member, Machine Learning Mentor December 2020 - May 2022

- Led journal club discussions on research like Settles and Meeder's (2016) Trainable Spaced Repetition Model for Language Learning.

Phoenix Scholars **Advising, Editing**
Low-Income and First-Generation Student Mentor September 2020 - February 2022

- Mentored first-gen low-income student through college and scholarship application process, now committed to UPenn Class of 2026

Awards

Angels Wings Scholarship: \$10,000 scholarship awarded to select Thai American students 2021

Hadden Scholar: Renewable \$4,000 nation-wide scholarship awarded by the Youth Foundation 2020

Thai National Youth Science Ambassador: 1-of-5 high school and college students selected by Thai Embassy 2017

Skills

Languages: Human (English/Chinese/Thai), Swift, Python, SQL, R, C, Java, HTML/CSS/Javascript, Typescript, Lisp, Bash

Tools: PostgreSQL, FastAPI, SQLAlchemy, Vue, React, Docker, Traefik, Tidyverse, SpaCy, Pandas, PyTorch, Fastlane, Git