

# Cat Mai

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🌐 [catxmai](#)

## Education

**Clark University, Worcester, MA.** 2018–2022

B.A. Mathematics (Honors Thesis, Advisor: Michael Satz)

B.A. Computer Science

**Green River Community College, Auburn, WA.** 2016–2018

High school diploma (Associate of Arts program), *High honors*, Philosophy

## Research Experience

\*RA=Research Assistant.

**Honors Thesis, Clark University,** Jun '21–Present

Advisor: Michael Satz.

Working on Hamiltonian Markov Chain for Bayesian Models (tbd) [\[repo\]](#)

**Human-Computer Interaction Intern, Brown University,** Summer '21

Mentors: Jeff Huang, Talie Massachi.

- Modified, retrained models to predict affect from finger pressure and 6dof motion replay
- Analyzed user study data for writeup and visualizations
- Reviewed literature on mobile computing; rewrote a paper for submission.

**Human-Computer Interaction RA, Clark University,** Feb '20–Jun '21

Advisor: Shuo Niu.

- Crawled over 10,000 videos that was used across multiple project and wrote the sanitization pipeline. Co-author and lead maintainer of the lab's [crawler package](#).
- Reviewed literature and co-authored papers on parasocial relationships and online civic engagement.

**Human-Computer Interaction RA, Clark University,** Summer '19

Mentors: John Magee, John Garton.

- Developed proof-of-concept for a virtual garden visit for a conservation project. Rendered 3D photogrammetry models using site's photos. [\[demo\]](#)
- My early models have helped Dr. Garton's colleague secure a Futures grant and Dr. Garton present the project to grant boards.

**Science Education RA, NGSX Learning Lab @ Clark University,** Sep '18–Jun '21

Advisor: Sarah Michaels.

- Worked with the lab on teachers' talk moves in science classrooms to understand what makes science lectures productive and to improve professional development for science teachers
- Investigated effectiveness of visualization tools [\[Class Discourse Analyzer\]](#) for classroom talk

## Work Experience

**Teaching Assistant, Clark University.** Aug '19–Present

Prepare solutions and grade homework. Hold weekly lab sessions and office hours.

CS 180 Automata Theory	Fa 2020
CS 120 Intro to Comp Sci-Python	Fa 2019
CS 121 Data Structures-Java	Sp 2021, Fa 2021
MATH 114 Discrete Mathematics	Sp 2020, Fa 2021
MATH 124, 125 Honors Calculus I, II	Fa 2020, Sp 2021, Fa 2021

**Technician Intern, Hamilton Computer Repairs.**

**Nov '19–Aug '20**

Shadowed technicians; performed diagnostics and hardware replacement for laptops and PC.

## Publications

\* = equal contribution

### Conference Papers.....

- CSCW '21 Shuo Niu, **Cat Mai**, Katherine G. McKim, and Scott McCrickard. “#TeamTrees: Investigating How YouTubers Participate in a Social Media Campaign”. *ACM Conference on Computer-supported Cooperative Work*. [\[pdf\]](#).
- CHI '21 Shuo Niu, Ava Bartolome\*, **Cat Mai\***, and Nguyen Binh Ha\*. “#StayHome #WithMe: How Do YouTubers Help with COVID-19 Loneliness?” *ACM CHI 2021 Conference on Human Factors in Computing Systems*. (Acceptance rate = 26.3%) [\[pdf\]](#).

### Posters & Extended Abstracts.....

- CSCW '21 Katherine McKim, **Cat Mai**, Danielle Hess, and Shuo Niu. *Investigating Drug Addiction Discourse on YouTube*. [\[pdf\]](#). CSCW '21.
- Winter Fest '21 **Cat Mai**. *How YouTubers Participate in a Social Media Campaign: A Culture-Based Analysis of #TeamTrees*. [\[pdf\]](#). Winter Fest '21 Clark University.
- Fall Fest '19 **Cat Mai\***, Tina Chiem\*, and Anisha Hassan\*. *Odd One Out”: Model Based Biology in an ESL Classroom*. [\[pdf\]](#). Fall Fest '19 Clark University.

## Awards, Honors

**2020:** LEEP Research Fellow (2,500 for research)

Clark University

**2018–2022:** Traina Scholarship (20,000 annually, top-level awarded)

Clark University

## Service

**Diversity & Inclusion Committee, American Go Association.**

2020–Present

- Analyzed education initiatives, market research, and surveys for Go/weiqi nation outreach.
- Co-directed e-US Open Tournament 2020 with around 1000 players.

**Math Tutor, Massachusetts Correctional Institution.**

2018–2020

- Tutored weekly as part of prison education program – The Petey Greene program.

**President of Philosophy Club, Green River College.**

2017–2018

- Held weekly discussion of readings with faculty advisor; outreach.

## Tech Stack

**Proficient:** Java, Python, Kotlin,  $\text{\LaTeX}$ , JavaScript | **Familiar:** C/C++, R, Bash