Cat Mai

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EDUCATION	**Ph.D. Computer Science**, New York University (NY, USA) Advisor: Damon McCoy, Center for Cybersecurity	2022–Present
	B.A. Computer Science, **B.A. (Hons) Mathematics**, Clark University (MA, USA) Advisor: Michael Satz	2018–2022

RESEARCH EXPERIENCE

Research Associate, Agricultural Impacts Group @ Clark University — Jan–Aug 2022
Mentor: Lyndon Estes
- Trained, integrated features, and ran inference for deep learning models on AWS.
- Refined CNN models to classify crop types and regress on field boundaries.

Research Assistant, Human–Computer Interaction @ Brown University — May–Sep 2021
Mentors: Jeff Huang, Talie Massachi
- Worked on Automotion, a usability test of mobile device interaction. I modified, retrained machine learning models like CNN, Random Forest, SVM to predict user's affect.
- Submitted manuscript to IMWUT '21. Our paper reveals insights about using human labelers vs. ML models to predict user emotion from mobile gyroscope data.

Research Assistant, Clark University — Feb 2020–Jun 2021
Mentor: Shuo Niu
- Co-author and maintainer of the lab's Python package
- Our papers identified patterns in parasocial relationships and civic engagement on YouTube.

TEACHING EXPERIENCE

Teaching Assistant, Clark University — Aug 2019–May 2022
Lead weekly labs and office hours. Prepare solutions and grade assignments.

Computer Science	Data Structures, Discrete Structures, Automata Theory
Mathematics	Discrete Mathematics, Honors Calculus I–II, Multivariate Calculus

AWARDS

Future Leader PhD Fellowship, New York University	2022–2024
LEEP Research Fellow, Clark University	2020
Richard Traina Scholarship, Clark University	2018–2022

TECHNICAL

Languages Python, Java, SQL, R, JavaScript, LaTeX

Skills Data analysis, Statistical inference, Experiment design, Academic publication

VOLUNTEER AND SERVICES

Math Tutor, Getting Out Staying Out	2023–Present
Diversity & Inclusion Committee, American Go Association	2020–2023
Math Tutor, Massachusetts Correctional Institution	2018–2020

PUBLICATIONS * = equal contribution

CONFERENCE PAPERS

In submission
Anonymous Authors. "Understanding the Perils of YouTube's Privacy Settings on Ad Safety". *In submission at ACM - TheWebConf '24 (WWW).*

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 2021.* [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 Conference on Human Factors in Computing Systems 2021.* [pdf].

POSTERS & EXTENDED ABSTRACTS

Fall Fest '21
Dinithi Silva-Sassaman, **Cat Mai**, Jing Qian, and Jeff Huang. *Predicting Emotion and Attention from Smartphone Behavioral Data.* [pdf]. Fall Fest '21 Clark University.

CSCW '21
Katherine McKim, **Cat Mai**, Danielle Hess, and Shuo Niu. *Investigating Drug Addiction Discourse on YouTube.* [pdf].

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.

Class report, 2021
Numerical Analysis: Tension Spline Interpolation. [pdf].

Class report, 2020
Emotional Analysis Via Content Creation on YouTube During COVID-19. [pdf].

SELECT COURSEWORK
Applied Application Security, Network Security, Quantitative Finance, Cyber Law
Theory Numerical Analysis, Quantum Computing, Abstract Algebra, Real Analysis