Matthew O. Makila

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GOAL

Ph.D. in Computer Science with a focus on human-computer interaction (HCI), specifically for accessibility, wellbeing, and creativity support. Using design, user studies, and data science, I look to improve social outcomes and technology for Black, Latin, and neurodiverse communities.

EDUCATION

University of Illinois, Urbana-Champaign (UIUC) ***August 2024 – May 2029***
Ph.D. Computer Science (Human Computer Interaction) *GPA: 4.0/4.0*

University of Maryland, Baltimore County (UMBC) ***August 2020 – May 2024***
B.S. Computer Science (Data Science and AI/ML Tracks), **Minor:** Sociology *GPA: 4.0/4.0*

RELEVANT COURSEWORK AND SKILLS

Relevant Coursework	Research Methods for HCI, User Interface Design, Data Science, ML, AI, Software Engineering, Data Structures, Algorithms, Digital Design, Statistics, Computer Security
Coding Experience	Python, JavaScript, R, SQL, HTML, C++, Java, MATLAB
Analytical Skills	Large-Scale Data Processing, Web Development, User Studies (interviews, surveys), Statistical Analysis, Exploratory Research, CAD, AI, Software Engineering
Software & Tools	Anaconda, Streamlit, React, Node.js, Git, SQLite, VSCode, Pytorch, Google Colab, Tableau, Flask, Jira, LaTeX, MS Office

RESEARCH EXPERIENCE

University of Illinois Urbana-Champaign, *June 2025 – Present*
Mentor: **Dr. Sarah Sterman**
Social Journaling Interface Design for Close, Long-distance Relationships

University of Illinois Urbana-Champaign, *January 2025 – Present*
Mentor: **Dr. Rachel Adler**
A usable and accessible learning tool for K-8 and university students to better understand accessibility,
People, Not Platforms: How Older Adults Manage Money

University of Illinois Urbana-Champaign, *August 2024 – June 2025*
Mentor: **Dr. Camille Cobb**
Usable security and privacy for city-wide security affecting marginalized groups to inform design and policy implications

INDUSTRY WORK EXPERIENCE

Institute for Defense Analyses (IDA), *June 2024 – Present*
Mentors: **Dr. Clifford Bridges, Laura Odell, Cameron Dilorenzo**
Software Engineering Intern in the Information Technology and Systems Division (ITSD) devising a dynamic, usable, and large-scale web application for global economic policy, enriched by user studies and stakeholder engagements

PRESENTATIONS

Matthew Makila, Zahid Hasan, Azim Khan, Nirmalya Roy. *April 2024*
CARE: Continuous Contactless Respiratory Rate Estimation using Particle Video.
Howard Hughes Medical Institute (HHMI) Science Meeting (poster).

Matthew Makila, Zahid Hasan, Nirmalya Roy. *August 2023*
An Approach to Camera-based Contact-less Breathing Rate Monitoring.
UMBC Summer Undergraduate Research Symposium (oral, poster).

HONORS AND AWARDS

GEM Fellow *July 2024*

UIUC Doctoral Merit Fellowship (DMF) *April 2024*

Fulbright Research Scholar Alternate (Norway, 2024) *April 2024*

UMBC Meyerhoff Scholar (M32) *September 2020 – May 2024*

UMBC Louis Stokes Alliance for Minority Participation (LSAMP) Fellow *September 2020 – May 2024*

UMBC JHU VTSI Scholar *September 2023 – May 2024*

UMBC Dean's List *September 2020 – May 2024*

Rite Aid Scholar *September 2023*

TEACHING

A Vision for Engineering Literacy & Access (AVELA) Instructor, Computational Sustainability *July 2025*

Prison Math Project Assistant Instructor *July 2025*

UMBC Computer Science I Teaching Assistant *August 2021 – May 2022*

MISCELLANEOUS PROJECTS

Game Development *February 2024 – Present*
Web-based game utilizing JavaScript, Flask, HTML, CSS, API calls, and SQLite3

Online Portfolio Webpage *February 2024 – Present*
Created with HTML, CSS (Bootstrap)

Application to Predict Tennis Scores *December 2024 – Present*
Using online tennis data to train a predictive scoring system

Interactive 3D Scene Reconstruction *August 2023 – December 2023*
Tool finding 3D object position from 2D images with Pytorch ResNet,
MiDaS vision model, and Panda3D

LEADERSHIP AND EXTRACURRICULARS

University of Illinois Urbana-Champaign Treasurer *September 2025 – Present*

National Society of Black Engineers (NSBE) *September 2020 – Present*

Tennis Team Treasurer *September 2021 – May 2025*

SERVICE

Panelist for UMBC-LSAMP (3), *Graduate School, Wellness Strategies, Academic Success* *February 2023- June 2025*