

Katelyn Morrison

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Research Interests

Computational sustainability, ubiquitous computing, societal computing, socio-technical systems, temporal-spatial analysis, urban informatics, crowdsourcing, smart cities, smart mobility, urban systems, applications of machine learning to mitigate climate change

Education

B.S. in Computer Science | Certificate in Sustainability

May 2021

Relevant Coursework: Data Structures (Java ~ Fall '18), Philosophy of Artificial Intelligence (Fall '18), Current Issues in Sustainability (Fall '19), First Experiences in Research (Spring '19), Algorithm Implementations (Java ~ Spring '20), Smart Cities (Spring '20), Research Methods Seminar w/ Study Abroad Trip to Manizales, Colombia (Spring '20), Intro to Matrices & Linear Algebra (Summer '20), ArcGIS, GPS, & Computer Methods (Summer '20), Software Engineering (Summer '20)

Research

Undergraduate Student Researcher

January 2020 – June 2020

Center for Latin America Studies: University of Pittsburgh

Advisor: Dr. Dolores Lima

- * Learning methods of formal research including how to create a research question, create useful surveys to gather your data, and make novel insights for conclusions.
- * Conducting individual research project in Spanish in Manizales, Colombia
- * Research topic: To better understand how adults in Manizales, Colombia assess and evaluates the state and quality of the current bike sharing system offered there.

Undergraduate Student Researcher/Developer

August 2019 - Current

Swanson School of Engineering: University of Pittsburgh

Advisor: Dr. William Clark

- * Gained understanding with how to use methods in the OpenCV library to perform live object detection and tracking
- * Worked on a collaborative team of a designer/hardware engineer and a project manager. Developed way to calculate thoracic rotation range of motion.
- * Working on submitting to Face & Gesture Analysis for Health Informatics Workshop at ACM ICMI 2020.

Undergraduate Student Researcher/Developer

October 2017 – May 2018

Chemistry Department: Moravian College

Advisor: Dr. Shari Dunham

- * Mentored by and collaborated with Dr. Shari Dunham on a personal research project that we were both passionate about.
- * Met bi-weekly to plan deliverables, design experiments, analyze data, draw conclusions.
- * Researched the impact of recycling signage in freshmen residence halls in hopes to discover ways to encourage the student body to do a better job at recycling in their dorms and around campus.

Presentations

- * "Civic Hacking & Urban Informatic: Mapping Data with GeoPandas", PyOhio 2020, July 2020
- * "Impact of Signage on First Year Residence Halls Recycling", Moravian College 13th Annual Undergraduate Student Scholarship and Creative Endeavors Day, presenter, Bethlehem PA, April 17th, 2018
- * "Dual Live Angle Calculation and Object Detection", University of Pittsburgh Science2019, presenter, Pittsburgh PA, October 17th, 2019

Other Experiences

University Innovation Fellow August 2019 - Current

Stanford University d.School & University Innovation Fellowship

- * Participated in a 6-week intensive training through the Stanford d.School on design thinking, rapid prototyping, innovation, and entrepreneurship.
- * Worked with 3 other students at my university to research what the innovation and entrepreneurial atmosphere on our campus looked like.
- * Grew professionally and intellectually through navigation of University of Pittsburgh current infrastructure for innovation. Final project: University-wide interdisciplinary I&E certificate program.

Makerspace Student Employee August 2018 - Current

Open Lab @ University of Pittsburgh | University Center for Teaching & Learning

- * Initiated increased student participation at on campus maker space. Created student run workshop series on the resources that are offered in the lab.
- * Creating documentation, training, guides and policies for the new space with a full-time worker.
- * Experienced in the following: laser cutter, 3D printer, vinyl cutter, Adobe Illustrator virtual reality, heat press, etc.

Honors and Awards

* 2020 Conference Co-Chair Organizer December 2019 - Current

Doctoral Consortium for Computational Sustainability 2020

* Adobe Research Women in Technology Scholarship Finalist November 2019

* Dare Mighty Things Hackathon Finalist [Chicago, IL] October 2019

* Events Coordinator for Sustainability Projects September 2018 – May 2019

Student Office of Sustainability | University of Pittsburgh

* Emerging Leaders Scholarship Program August 2017 – May 2018

Moravian College

* United Student Government Representative January – May 2018

Moravian College