Tess Eschebach

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I am an interdisciplinary researcher and student with a focus on the intersection of art, technology, and media theory. With a strong background in both technical coding tasks and artistic pursuits in the digital space, I seek to push new frontiers. I am particularly interested in conceptualizations of anonymity, open access, and grappling with the implications of increasing integration of media based technologies in daily life. I am a dedicated communicator with experience collaborating in large and small group settings.

Education

University of Chicago **Hyde Park, IL**
Phd Student: Computer Science *(September 2023-Present)*

University of Michigan - Ann Arbor **Ann Arbor, MI**
Bachelor of Science in Engineering in Data Science Summa Cum Laude *2023*
College of Engineering

Bachelor of Science in Film, Television, and Media with Distinction *2023*
College of Literature, Science, and Arts

Coursework: Machine Learning, New Media Theory, Artificial Intelligence, Web Systems, Circuits, Online Communities, Digital Bodies, 360 Video, Virtual Reality, Cyber Security

Research Experience

University of Michigan - Ann Arbor **Ann Arbor, MI**

Computational HCI Lab *Research Assistant (November 2021 - Present)*

- Leading a human subject study surrounding the monetization strategies of educational YouTubers and influences of their algorithmic perceptions on choice of platform
- Crafting a semi-structured interview guide based on in depth literature review
- Working with an interdisciplinary team to integrate the fields of sociology, art, and human-computer interaction into everyday resistance techniques in online spaces

Digital Water Lab *Research Assistant (May 2021 - May 2022)*

- Building water level “nodes” utilizing PCBs, depth sensors, and custom casing
- Deploying “nodes” in the field by surveying sites and installing sensors near rivers
- Creating graphical representations of water level sensor data on Grafana and integrating water data from numerous sites into a public map using .geojsons hosted on AWS
- Leading the early stages of collecting GPS elevation data to create more accurate graphs

- Working with Oakland County, Michigan to create custom water level dashboards to help remotely monitor high risk locations to prevent flooding and maintain legal levels

University of Michigan Libraries *Student Library Intern (July 2020 - March 2021)*

- Animating videos with Adobe Animate geared towards helping multilingual students engage with library resources, focusing on the multitude of ways to get a book
- Working with language specialists and library staff to translate the video into multiple languages and to develop a understandable visual language for the underlying video
- Writing blog posts about underutilized resources after researching student library use

Presentations

Eschebach, T., Schmidt, J., Kerkez, B. Preventing Flooding Through Data Visualization. Presented at: Data for Public Good Symposium 6; March 2022; Ann Arbor, MI.

Exhibition History

Eschebach, T. Consume. Exhibited at: Digital Studies Institute "Amplify: DSI Student Showcase"; April 2023; Ann Arbor, MI

Eschebach, T. Making Memories. Exhibited at: Digital Studies Institute "Amplify: DSI Student Showcase"; April 2022; Ann Arbor, MI

Technical Projects

College Subreddit LLM: Comment Generator *April 2023*

- Working with a team of students to brainstorm ideas and collaborate on implementation
- Fine-Tuning GPT-2 utilizing Hugging Face Trainer on a specifically preprocessed dataset
- Classifying input using a linearSVM and generating fine-tuned GPT-2 comments on Colab

Designing for Everyday Resistance: Using Fables to Contest the Scripts of Surveillance Capitalism *November 2022*

- Coding interaction between Aurdiunio on a dog and a wifi router to modulate what sites are allowed on the network based on specific sensor inputs from the Arduino
- Aiding in the creation of casing for sensor to be attached to a collar with a low profile
- Integrating ideas of surveillance capitalism and coding human subject data about overcoming social media addiction to create interventions promoting desired behaviors

Digital Media Projects

Consume *December 2022*

- Creating a virtual environment in Unity using textured primitives and particle motion
- Animating a camera to move through the video to create a filmic sense to the VR work
- Editing together scenes in 360 utilizing Adobe Premiere and exporting to YouTube
- Critiquing the "black box" of recommendation algorithms and time they "consume"

Virtual Production for Music Video *November 2022*

- Utilizing the Unreal Engine to create a flooded city environment with imported assets
- Collaborating with a guest artist, environment designers, and costume designers
- Projecting environment as a background in a professional quality production studio

Birds, Bees, Bugs, Bats, Look I've Made a Silly Hat *May 2022*

- Writing, directing, and starring in five minute 360 degree film made for viewing in VR
- Coordinating with cinematographer, producer, and editor to complete the final work
- Experimenting with lighting and framing of action that is augmented in the 360 space

Making Memories *December 2021*

- Pulling personal data from SnapChat and using Javascript code to download all photos
- Utilizing custom neural network within a Generative Adversarial Network to create intentionally abstract images utilizing personal SnapChat photos as the training data set
- Coding an HTML website with CSS to display work as .gifs and explore sense of identity

Paper Anti-Surveillance Mask *October 2021*

- Crafting an origami paper and wire mask to obscure a face inspired by anti-surveillance
- Directing and editing a short video showcasing the mask, trees, and broken technology

Teaching Experience

University of Michigan - Ann Arbor, College of Engineering **Ann Arbor, MI**

Intro to Computer Security - EECS 388 *Instructional Assistant (December 2022 - April 2023)*
Instructional Assistant - Project Development (June 2023 - July 2023)

- Teaching a lecture style discussion section reinforcing topics and presenting new material
- Holding office hours to answer student questions on course projects and cyber security
- Setting rubric for a subsection exam questions and grading exams with a team of IAs
- Increasing accessibility by clarifying project descriptions and shorting project start up
- Aiding the development of course materials integrating Autopsy, TOR, and HTML sites

University of Michigan - Ann Arbor, School of Information **Ann Arbor, MI**

Online Communities - SI 429 *Instructional Assistant (August 2022 - December 2022)*

- Assisting with activities during class periods and answering student questions
- Grading weekly reading responses and providing feedback on large class assignments
- Setting up Canvas page for the full term including graded assignments and readings
- Creating and moderating Discord community for the class to promote online engagement

Leadership Experience

Inter-Cooperative Council **Ann Arbor, MI**

Mich-Minnies *Treasurer (May 2022 - August 2023)*

- Managing over $6000 a month to provide food and utilities for 40 plus house residents
- Working with the larger non-profit organization to maintain receipts and reimbursements
- Running budget meetings of 30 plus individuals to vote on specific allocation of funds

Mich-Minnies *Work Manager (January 2022-May 2022)*

- Allocating four hours of chores per week for 40 plus residents of a coop
- Enforcing completion of work and aiding those who needed assistance

University of Michigan - Ann Arbor **Ann Arbor, MI**

Sierra Club *Vice President (May 2021 - January 2022)*
Officer (September 2020 - May 2021, January 2022 - May 2022)

- Establishing club on campus and helping with formatting structures of meetings
- Facilitating workshops about sustainability and supporting park and game day cleanups
- Representing the University of Michigan chapter of Sierra Club at monthly meetings with Huron Valley Sierra Club and engagement with state-level Sierra Club representatives

Awards

Excellence in Sustainability Honors Cord Program. The University of Michigan. 2022-2023.
Golden Wallet. Winter Annual Meeting. Inter Cooperative Council Ann Arbor. 2023.
Best in Show. Amplify. Digital Studies Institute at The University of Michigan. 2023.
Honorable Mention. Amplify. Digital Studies Institute at The University of Michigan. 2022.
University Honors. The University of Michigan.
Dec. 2018, April 2020, Dec. 2020, Dec. 2021, April 2022, Dec. 2022.
Dean's List. The University of Michigan.
Dec. 2018, Dec. 2019, Dec. 2021, April 2022, Dec. 2022.
James B. Angell Scholar. The University of Michigan. March 2022.
William J. Brainstorm Freshman Prize. The University of Michigan. 2019.

Skills

Computer: C++, Python (PyTorch and Pandas in depth), HTML, JavaScript, AWS, MATLAB, SQL, LaTeX, Git, and R
Circuits: Eagle, Verilog, Arduino, and LTspice
Creative: Adobe Suite (Premiere Pro [Audio and Video Editing], Animate, Illustrator, Photoshop), Audacity, Cinematography, Audio recording, SnapChat Lens Studio, Unity and Unreal Engine [for VR]