Mrinalini Singha

Portfolio: mrinalinis.work & mrinalini.xyz | Contact: mrinalinixsingha@gmail.com

Education

Massachusetts Institute of Technology   *2022 - 2024*
M.S. Art, Culture & Technology
Thesis: Disrupting Monocultural Tendencies through Multimodal Montage

The National Institute of Design *Ahmedabad*   *2016 - 2021*
B.Des. Film & Visual Communication

The Royal Academy of Art (KABK) *The Hague*   *2019*
Exchange Semester in Interactive Media Design

Industry Experience

Creative Technologist Intern *Deeplocal, Pittsburgh*   *June 2023 - August 2023*

- Contributed to client projects for Google (including Google Cloud Next 2023 exhibits: Wendy's Fresh AI & Google Vertex AI Postcards), Netflix and Qualcomm.
- Developed software and prototypes involving tangible interactions with generative AI models.
- Programmed sensors and interactive components for installations using Node.js and Touchdesigner.
- Built a logging system for easier debugging and benchmarking, running usability tests using Node.js and the Google Vertex AI API.
- Conducted a technology survey on cutting-edge AR applications and machine learning integrations.

Design Researcher *Alt News, India*   *Aug 2021 - Aug 2022*

- Conducted foundational research into misinformation and hate speech in India's media and political landscape, contributing to organization reports and vision documents.
- Conducted user experience research & literature reviews, pitched fact-checking tools and user interface prototypes for website and mobile app design.
- Produced video analyses of misinformation trends, contributed to educational tool-kits and branding.

Research Projects & Experience

A Mystery for You *Student Game Competition Winner at ACM CHI'24*

- Designed a fact-checking game enhanced by large language models (LLMs) and a tangible interface.
- Developed unique HCI gameplay that combines generative scenarios for sequential, investigative play with the affordances of slow media to invoke more thoughtful and embodied interactions.
- Considered the implications of algorithmic bias and the potential of utilizing such role-play as a diagnostic tool for further inquiry.
- Technical Implementation: Programmed in Node.js and React to create a custom program designed utilizing interactive prompt engineering via an OpenAI API. This also involved physical programming of Arduino boards and electronic circuitry for a custom-fabricated game interface.

Social and Ethical Responsibilities of Computing *(SERC) Scholar at MIT*   *Oct 2023 - Present*

- Conducted research in the Computing and Climate Justice Group, focusing on political ecology and discard studies of computer hardware life-cycles, cloud-computing, and e-waste.
- Focused case-study into the informal recycling ecosystem in India and potential futures.

Sofdesk *Selected and Incubated at MIT Design X*   *Dec 2022 - June 2023*

- Concepted and prototyped a series of customizable, tangible and soft HCI products designed with diverse users in mind.
- Conducted user-studies through in-depth interviews and co-design methods for needs assessment, defining pain-points and user journeys.
- Conducted market research and business modelling as part of a rigorous venture design process.

Stata Island *Selected for ISEA'24*

- A whimsical interactive virtual world that explores the indigenous and institutional histories of the land on which MIT is built.
- Its accompanying paper "Re-Worldings at MIT of Beaver Terrapolis Terristories" is both a decolonial critique as well as a call for the potential of immersive game technologies.

Worlding *Research Assistant at the MIT Open Documentary Lab*   *Sept 2022 - Sept 2023*

- Contributed to Worlding 2022 & 2023 (Open Documentary Lab and Unity Technologies initiative).
- Conducted qualitative research (data collection, literature reviews & analysis) for Worlding, managing over 500 relevant data points, including projects, literature, and organizations.
- Contributed to organizing the Indigenous Immersive Incubator 2023.

Himalayan Folk Collective *Co-founder*   *March 2021 - Present*

- Engage in archival and revival efforts of folk culture.
- Built a participatory web archive for collecting regional folktales.
- Experimenting with AI NPCs (non-player characters) and game engines for cultural heritage experiences testing in InWorld AI and Unity 3D

Rural Design Challenge *Lucitopia, China*   *May 2019*

- Conducted field research in Xixi Valley on the revitalization of the rural region.
- Repurposed Mahjong game-play as a collaborative design thinking tool and facilitated workshops for cross-age and cross-linguistic collaboration.

Recognition & Awards

• ACM CHI Student Game Competition Winner (2024)   • Ars Electronica IDSA Founding Lab Student (2023)   • MIT Design X Fellow (2023)   • KC Mahindra Fellow (2022)   • Ford Foundation Fellow (2020-2021)   • Dharamshala International Film Festival Film Fellow (2018)   • IB World Students Conference Barcelona Scholarship (2016)   • tGELF Youth Leader Runner's Up (2013-2014)

Publications

Conference Proceedings

C1 *"A Mystery For You: An LLM Powered Fact Checking Game with a Tangible Interface"* Haoheng Tang & **MS**; ACM CHI Conference, 2024.

C2 *"Re-Worldings at MIT of Beaver Terrapolis Terristories"* **MS**; International Symposium on Electronic Art (ISEA), 2024.

Conference Presentations

P1 *"Universities of the Future"* **MS** et al.; Founding Lab, Ars Electronica 2023.

P2 "Roadmap for Building a Collaborative Ground Up Digital Community Archive" **MS**; Paper Presentation, Oral History Association of India (OHAI) Conference, 2022.

Journals

J1 *"WORLDING is a Verb: Co-Creating Climate Futures with 3D Game Environments and Community Wisdom"* Katerina Cizek, Marina Psaros, Srushti Kamat, Paisley Smith, **MS** & Vivek Bald; Leonardo, 2024 (under review).

J2 *"A Framework of Comparison:Peter Brook's The Mahabharata and Dharamvir Bharati's Andha Yug"* **MS**; Trellis Design Research Journal Vol 3, Issue 9, 2019.

Exhibitions & Screenings

Exhibitions	• Solo *"Forensic Artifacts of a Democracy in Crisis"* Exhibition, at MIT ACT Student Gallery (2023) • Group *"Counteractions Show"* Group Exhibition at Distillery Gallery, Boston (2023) • Group NID Exhibition Hyderabad Design Week (2019)
Screenings	• MIT Museum (2023) • MIT Media Lab (2023) • Mumbai International Film Festival (2022) • Alpavirama Film Festival, Ahmedabad (2022) • International Cultural Artifact Film Festival: Semi-Finalist • News Fest Film Festival: Best Int. Student Film (2021) • Chhatrapati Shivaji Film Festival, Pune: Best Film (2019) • Urban MediaMakers Film Festival, Atlanta (2019) • Little Mexico Film Festival: Film (2018)

Teaching Experience

Teaching Assistant *MIT*   *Sept 2022 - May 2024*

Assisted teaching four Graduate level courses at MIT:

- **Art and Agriculture** with Prof. Nida Sinnokrot (S'24)
- **Climate Visions** with Prof. Gediminas Urbonas (F'23)
- **Advanced Video and Related Media** with Prof. Judith Barry (S'23)
- **Introduction to Photography and Related Media** with Lect. Lara Baladi (F'22)

In these roles, I have:

- Developed course assignments and deliverables alongside the course instructor.
- Conducted workshops for classes and helped plan and execute student exhibitions.
- Held one-on-one meetings to discuss student projects and provide feedback.

Kaufman Teaching Certificate Program *MIT*   *2023*

- Participated in a wide range of workshops on university level pedagogy and curriculum design such as course design, creating inclusive classes and active learning strategies, prepared own syllabus and presented lessons.

Key Competencies

Software	• Adobe Creative Suite (Premiere Pro, After Effects, etc.) • Unity 3D • TouchDesigner • Figma • Cinema 4D • Blender • AR Core
Programming	• JavaScript • Node.js • React • Python • HTML/CSS • Google Vertex AI • Google Colab • Python • LaTeX • AI API Integrations
Hardware	• Physical Computing • Arduino • Raspberry Pi • Sensor Integrations • Prototyping
Certifications	• CITI Humanities Responsible Conduct of Research • MIT Kaufman Teaching Certification • Google Foundations of UX Design