

Curriculum Vitae

Farjana Ria Khan

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I am a researcher in the field of Human Computer Interaction where I express my passion in exploring the intersections between critical design, tangible interaction, society, and games to investigate new forms of expression and creativity.

Education

2018 - 2020 **University of Colorado, Boulder | Boulder, CO**
Advisor: *Shaz Zamore, PhD*
M.S. in Technology, Media and Society | Creative Technologies and Design track | Overall GPA 3.65

2013 - 2018 **University of Colorado, Boulder | Boulder, CO**
B.A. in Art & Art History | Departmental GPA 3.62
Minor in Technology, Arts, and Media | Departmental GPA 3.60
Minor in Japanese Studies | Departmental GPA 3.58

Relevant Courses

Engineering Creative Technologies, Object, Haptic Interfaces, Calculus for Engineering

C.S. / Science Foundations of Computer Science, Game Prototyping, Game Development, Web Development, Physics I

Design / HCI Meaning of Technology, Digital Art I, Digital Art II, Art in Society, Advanced Perspectives in Contemporary Art, Critical Perspectives, Design Studios, Design Thesis

Employment

2019 (Current) **Meow Wolf Denver | Collaborating Artist & Team Lead/Producer | Denver, CO**
Meow Wolf is a nationally renowned art collective based in Santa Fe, New Mexico. They've recently expanded to the city of Denver. As one of the local collaborating artists, I've designed a permanent installation room, which I'm also building along with a nine-person team that I lead and manage.

2020 **University of Colorado, Boulder | Research Assistant | Boulder, CO**
Advisor: *Mirela Alistar, PhD*
Funded by the University's Center for Humanities and Arts, I conducted research for the project, Nurturing Light, an escape-room style installation and living computing interface that embeds bioluminescent algae in the system. I digitally and physically fabricated the entire puzzle artifacts and interface, conducted user testing, and wrote on research findings as first author to submit for publication.

2019 **University of Colorado, Boulder | Research Assistant | Boulder, CO**
Advisor: *Daniel Leithinger, PhD*
This research project was initially for the development of a AR/VR scanning application for the THING Lab in collaboration with Sony Ericsson. My task was to help with development while working with Unity 3D, Oculus Rift, and SR Works' SDK.

- 2018 **University of Colorado, Boulder | Learning Assistant | Boulder, CO**
Lecturer: Dan Rankin | ATLAS 2300 (TEXT)
 I ran two recitations to help students with design and typeface using various Adobe Suite software and InVision, as well as go over lecture and grade students' homework.
- 2018 **Open Source Hardware Assoc. (OSHWA) | Graphic Design Consultant | Boulder, CO**
For the Open Hardware Summit (2018)
 I was a contracted design consultant for OSHWA and made banners and signage for their summit sponsors.

Research Projects

- 2020 **Nurturing Light: Sustaining Living Interfaces Through Ludic-Driven, Post-Anthropocentric Design**
Advisor: Mirela Alistar, PhD
 An escape-room style installation/living computer interface where the user navigates a pitch-black puzzle environment and solely depends on dinoflagellates (bioluminescent algae) as guidance. Nurturing Light proposes an alternative design approach to better sustain living interfaces, or computing interfaces that are embedded with live organisms. Nurturing Light combines and utilizes post-anthropocentric and ludic design values in its design process. *Software and fabrication tools used: Arduino IDE, Laser cutter, Woodshop*
- 2020 **Planes: a Collaborative VR Puzzle Journey to Promote Social Unity**
Advisor: Shaz Zamore, PhD
 As my masters thesis project, Planes is a multi-user, networked VR experience that involves anonymous collaboration, digital paper puzzle-solving, and reflective zoom paper workshops to help intertwine digital and real-world collaboration and learning. In the game, users anonymously (as in without names, voice, or other identifiers) interact with others to quickly solve virtual origami puzzles. Motivated by a need to create a more cohesive gaming culture, this game uses non-discriminatory, anonymous participation to mitigate social exclusion caused by VR games, as well as challenge social barriers in online gaming culture with mindful interaction. *Software and fabrication tools used: Unity 3D, Oculus Rift SDK, Photon, Paper prototyping*
- 2019 **Mechamarkers: Untethered Haptic Inputs for 3D Physical Interfaces**
Advisor: Ellen Yi-Luen Do, PhD
 Mechamarkers is a toolkit and computer-vision based system for designers to help make and sense low-cost physical actuator for 3D interfaces. I helped ACME lab members build inputs and 3D interfaces, construct the computer vision system physically as well as the calculating the homography, conduct and transcribe user studies, and write on research findings as third author to submit for publication. *Software and fabrication tools used: Processing, Python, Adobe Illustrator, Javascript, Otter.ai, Laser cutter, 3D printer, Cardboard prototyping*

Workshops/Lectures

- 2020 **"Visualize Your Research!" Workshop Series | Living Matter Lab | Boulder, CO**
 Hosted a four-part weekly workshop series where I taught research masters and PhD students how to create figures, storyboards, flowcharts, etc. for research papers and proposals.
- 2020 **Guest Lecturer | University of Colorado, Boulder | Boulder, CO**
Instructor: Maria Deslis | ATLAS 2300 (Process of Design)
 I guest lectured and discussed the principles of visual design.
- 2020 **Electronics Sewing Workshop | BTU Lab | Boulder, CO**
 Hosted a workshop where I taught BTU lab members and CU students how to use the lab's communal sewing machine, sewing basics, and tips for wearable electronics and sewing.

- 2018-2019 **Soldering Workshop | BTU Lab | Boulder, CO**
Hosted regularly occurring workshops to teach fundamental soldering skills to beginners in electronics.
- 2019 **“Ins and Outs of Electronics” Workshop Series | ATLAS Institute | Boulder, CO**
Hosted a three - part weekly workshop series where I taught incoming masters and PhD students the fundamentals of electronics, and object - oriented computing with Arduino (Arduino IDE and C++).
- 2019 **“So You Want to Make a Robot Fish?” Workshop Series | BTU Lab | Boulder, CO**
Hosted a semester - long workshop series where I taught students how to build simple animatronic robot fish.
- 2019 **Laser Cutter Prep Workshop | BTU Lab | Boulder, CO**
Workshop where I taught proper Laser cutter prep and technical tips on lasercut files with Adobe Illustrator.
- 2018 **Basic Electronics Workshop | BTU Lab | Boulder, CO**
Hosted an intensive workshop where I taught students on the fundamentals of electronics and Arduino.
- 2017 **Boulder POV Seminar | Boulder Public Library | Boulder, CO**
I took part in helping team seminars of artists, entrepreneurs, and creative technologists over the course of the summer in a leadership position.

Presentations

- 2020 **2020 BioDesign Challenge | New York City, NY | International Zoom Summit Presentation**
International competition/presentation. I was the team lead for the University of Colorado’s first ever team. We presented our project MyCo Domicilia, a DIY resource book for fabricating everyday objects with mycelium.
- 2020 **Boulder Experiments in Arts & Technology (B.E.A.T.) | Boulder, CO | Zoom Presentation**
Presented MyCo Domicilia on behalf of my team.
- 2020 **Boulder Experiments in Arts & Technology (B.E.A.T.) | Boulder, CO | Demo**
Presented a demo of alternative controller video game, OctaOut.
- 2019 **ATLAS Research Showcase ‘19 | Boulder, CO | Showcase**
Showcased research work, MechaMarkers, for the ACME lab, directed by Ellen Yi - Luen Do, PhD.
- 2019 **Whaaat!?! Festival ‘19 | Boulder, CO | Showcase**
Volunteered to demo alternative controller video game, Key Change, for student showcase.
- 2019 **ATLAS Expo ‘19 | Boulder, CO | Expo**
Third time exhibiting work at venue, showcased finals projects for Design Studios and Wearable Technology.
- 2018 **Boulder Experiments in Arts & Technology (B.E.A.T.) | Boulder, CO | Gallery**
Presented animatronic fish that swims in “water.”
- 2018 **Cabal Gallery | Denver, CO | Gallery**
Presented and sold work for locally - owned tech and art gallery.
- 2018 **ATLAS Expo ‘18 | Boulder, CO | Expo**
Second appearance at venue, showcased kinetic sculpture/musical device, Laser Harp.
- 2017-2018 **Art of Data | Boulder, CO | Exhibition**
Exhibition housed in the Canyon Gallery at the Boulder Public Library, showcased lasercut piece, Trails.

- 2017 **Remix Holiday Bash at the CMCI Studio | Boulder, CO | Exhibition and Performance**
Event where colleagues, musicians, and I performed a transmedia performance.
- 2017 **ATLAS Expo '17 | Boulder, CO | Expo**
First appearance at venue, showcased kinectic, wood sculpture *The Beginning of a Cosmic Kiddo*.
- 2016-2017 **MakerMade | Boulder, CO | Exhibition**
Gallery housed in Canyon Gallery at the Boulder Public Library, showcased *TBoaCK* and other works.

Awards/Accolades

- 2020 **CHA Small Grant Reward \$2,000**
Advising Faculty: Mirela Alistar
- 2018-2020 **BTU Lab Graduate Residency | Boulder, CO**
Lab Director: Alicia Gibb
- 2016-2017 **Dean's List | Academic Honors | Awarded 2x**
"Each semester the College of Arts and Sciences publishes the Dean's List to recognize students who have demonstrated academic excellence."

Publications

- 2020 **Dining-Centric Specularity | First Author | In Preparations**
Based on speculative artifacts project from *Critical Perspectives* class course, led by Laura Devendorf, PhD.
- 2020 **MyCo Domicilia | Main Author, Editor, Designer | Amazon Kindle**
Additional Authors: Fiona Bell, Theresa Matick, Malika Rakhminova, Arva Syed, and Shenali Uragoda

Relevant Skills

- Machine Shop** Laser cutting, 3D printing, CNC routing, woodworking, knitting, sewing, resin casting
- Hardware** Arduino, Raspberry Pi
- Design Tools** Illustrator, InDesign, Photoshop, Lightroom, Premiere, AfterEffects, Invision
- Other Software** Unity3D, Eagle Fusion 360, Blender, Fritzing, EasyEDA
- Programming** HTML5, CSS, Javascript, Node.js, Python, C++, C sharp, Processing, P5, LaTeX

