



**Payod Panda**  
Design engineering  
and HCI researcher

panda@payodpanda.com | payodpanda.com | LinkedIn | Google Scholar  
I work at the intersection of design, engineering, and research to study the future of knowledge work using GenAI and spatial computing technologies.

### Education

**PhD in Design**  
**Master in Graphic Design**  
**B.Tech, Production Engg.**

Immersive Technology in the Future of Work. 2021. *North Carolina State University*  
3D Visualizations to Help Designers Understand Code. 2016. *North Carolina State University*  
Project: Design and Fabrication of Badminton Practice Machine. 2013. *NIT Calicut*

### Selected Experience

**Microsoft Research**  
*Design Engineering Researcher*  
(*New Computing Experiences*)  
November, 2021 – present

- I design + build research-backed prototypes and study their use in collaborative knowledge work.
- I use the results to guide direction in product teams (Mesh, Teams, Office).
- Typical tech stack: Unity / C# for XR, JavaScript + node.js for web-based AI experiences.
- 6 patents (3 granted so far), 1 best paper award, 14 papers.

**Microsoft Research**  
*Research Intern*  
(*OCTO: Office of the CTO*)  
May 2020 – August 2020

- Built and studied avatar pipeline in Together Mode, influencing its implementation in MS Teams.
- Led a team of interns and senior researchers to prototype now patented product concept.
- Got buy-in from decision makers in MS Teams (avatar), MS Surface (headphones).
- 2 granted patents, 2 papers in top HCI venues.

**Google Brain Robotics**  
*Research Engineer Intern*  
(*Unannounced project*)  
May 2019 – August 2019

- Identified interaction design approaches for hybrid VR and screen-based media in unannounced Google Brain Robotics project.
- Built mid- and high-fidelity functional prototypes with existing tech stack.
- Implemented features in product by writing C# code for Unity game engine-based project.

**Google**  
*UX Engineering Intern*  
(*Google Docs + Sheets*)  
May 2018 – August 2018

- Worked with stakeholders to identify high-impact directions and built high fidelity web prototypes to test ideas with participants in cafe studies (semi-structured interviews).
- Disseminated research via demos and research reports.
- Awarded Google Peer Bonus award for “going above and beyond”.

**NC State University**  
*Immersive Tech Researcher*  
(*Advanced Viz Lab*)  
January 2018 – May 2018

- Developed and provided support on spatial data visualization projects (webXR, D3.js, Unity).
- Researched the potential of immersive technologies (AR / VR / MR) in data visualization.
- Established the foundations of the Immersive Analytics workstream at Digital Library Initiative.
- Evaluated NCSU Libraries’ tech infrastructure for delivering immersive visualization experiences and made tech acquisition recommendations.

### Relevant Skills

**XR**  
*Development:*  
*Devices:*

- 10+ years experience designing, developing, and evaluating different forms of spatial interfaces.
- Strongest with Unity and C#, but also comfortable with WebXR. Unreal in a pinch.
- Worked with VR and AR headsets, phone-based spatial interactions, non-visual spatial interactions (e.g., headphones), 3D displays (e.g., Looking Glass), cross-device interaction.

**AI**

- 2+ year experience building GenAI-enabled experiences for knowledge work (node.js-based).
- Experience with cloud-based as well as self-hosted models for on-device inferencing (ollama).

**Research**

- Qual-dominant mixed methods. Primarily interviews and focus groups, quant for triangulation.

### Relevant Projects

**AI, inking, knowledge work**

RabbitHole: Curiosity-driven knowledge exploration with LLMs on web canvas. [WIP]

**AI, inking, knowledge work**

ImaginationVellum: GenAI-driven ideation canvas with spatial prompts. [in review, UIST]

**hybrid work, XR**

Hybrid3D: Hybrid meeting room asymmetrical prototype. [CSCW’24, CHI’24] video

**AI, hybrid work, XR**

CoExplorer: Adaptive 2D and 3D meeting interfaces. [DIS’24, CHI’24]

**hybrid work, cross-device**

Beyond Audio: Headphones as a site for interaction. [ **BEST PAPER 1% DIS’23**] op-ed

**avatar, cross-device**

AllTogether: Avatars in hybrid conferencing environments. [CHIWORK’22] video

**hybrid work, inking , XR**

NapkinSketchVR: A Collaborative rapid VR ideation tool. video

**inking, haptics, XR**

Morphaces: Morphable surfaces for tangible sketching in VR. [C&C’21] video