



Payod Panda
Design engineering
and HCI researcher

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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

Hybridge3D: 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