Vishal Bharti

GitHub Website LinkedIn

: vishal20264@iiitd.ac.in
: +91 8933874972

Education

Indraprastha Institute of Information Technology Delhi (IIIT-Delhi) Delhi, India
B.Tech (ECE)

Publications

Curtain UI: Augmenting Curtains for Tangible Interactions 02 December 2024
Accepted in SIGGRAPH Asia 2024 Posters
DOI: 10.1145/3681756.3697935

Skills

Design Skills: Game Design and Development , AR/VR and MR Design and Development , Immersive Storytelling , UI Design , UX Research , Graphic Design , Illustration , User Testing and Evaluation

Programming Languages: C , GLSL , HLSL , Java , JavaScript , MATLAB , Python , SQL

Frameworks and Tools: Blender , Figma , LaTeX , MySQL , Machine Learning , OpenCV , OpenGL , OpenXR , Processing , React.js , TinkerCAD , Unity , Touch Designer

Experience

Indraprastha Institute of Information Technology, Delhi Delhi, India
Researcher · Creative Interfaces Lab *May 2024 - Present*

- **Research Contributions**: I immersed myself in many exciting projects at the Creative Interfaces Lab, transforming everyday items like curtains into interactive digital surfaces—such as **curtains as interactive surfaces** that respond to gestures using innovative sensors and dynamic UI feedback, enhancing user engagement. I developed **VoxCraft**, a voxel-based platform that lets users design and modify 3D environments in real time, providing intuitive tools that inspire creativity and encourage experimentation with digital architectures. Additionally, I've explored the captivating realms of **Mixed Reality**, **Virtual Reality**, and **Augmented Reality** using **Meta Quest 2** and **3** devices, crafting immersive applications that blend physical and virtual worlds, pushing the boundaries of interactive technology. This journey has been both challenging and rewarding, deepening my technical skills and passion for innovation.

Projects

Tangible Interactions with Curtain: Engineered an innovative interface that transforms ordinary curtains into interactive, tangible UI elements. Utilized embedded sensors and actuators to detect user gestures and enable dynamic digital interactions. Published findings in SIGGRAPH Asia 2024 Posters.

Voxcraft: Developed interactive voxel-based environments enabling creative and modular design. Implemented real-time manipulation of 3D structures, allowing users to construct, modify, and experiment with digital architectures intuitively.

Prototype of a Societal Impact App : Designed and prototyped a mobile application aimed at addressing a real-world societal challenge. Conducted user research, wireframing, and UI/UX design using Figma. Developed an interactive prototype demonstrating core functionalities and potential impact.

Simple Assembler and Simulator: Developed an assembler and simulator for a custom instruction set architecture, enabling machine-level execution of assembly code. Implemented opcode translation, memory management, and execution logic, ensuring accurate simulation of program execution.