SAURABHKUMAR RAMANBHAI PARMAR

saurabhparmar1507@gmail.com   www.saurabhparmar.com
                                              www.linkedin.com/in/saurabhcool001

Professional Summary:

Software Engineer and XR Developer with 9+ years developing embodied interactive systems for cultural and educational contexts. Demonstrated research capability through empirical user studies and adaptive AI-integrated systems at the University of Oxford. Expertise in multimodal interaction design, from gesture-based installations to adaptive VR environments, prioritizing accessibility and inclusive engagement.

Education:

MSc in Virtual and Augmented Reality | Distinction

Goldsmiths, University of London, UK | September 2024 – September 2025

- Awarded Best AR Project for dyslexia-aware accessible learning application
- Supported summer school workshops focusing on accessible teaching methodologies in immersive technologies
- Developed theoretical and practical expertise in designing inclusive interactive digital artifacts

Bachelor of Engineering in Information Technology

Gujarat Technological University, India | June 2010 – June 2015

Research Experience:

VR Developer and Research Intern | *University of Oxford – United Kingdom | May 2025 - Sep 2025*

- Designed adaptive VR learning environment investigating personalized interaction through behavioral analysis, demonstrating research capability in human-AI collaboration
- Implemented Reinforcement Learning agent in Python for real-time experience adaptation based on user movement and gaze patterns, advancing beyond static interaction paradigms
- Conducted rigorous three-group comparative study (n=30) with between-subjects design, collecting psychological data (STAI-State anxiety inventory) and usability metrics (SUS) to empirically validate system effectiveness
- Demonstrated methodological maturity through statistical analysis (ANOVA, post-hoc tests) and validation of human-AI interaction systems, with findings showing significant improvements in user experience

Lead Technologist | *Digital Heritage Innovator Contest – Nanjing, China | August 2025*

- Won Best Heritage Narrative Award for innovative cultural storytelling approach demonstrating creative research impact
- Designed and deployed "Canopy of Echoes," a dual-format experience combining immersive VR with physical kinetic installation, demonstrating expertise in embodied interaction design
- Engineered presence-based interactive system using Kinect sensors enabling intuitive, controller-free participation across multi-generational audiences
- Translated complex historical narratives into non-verbal, motion-based interactions, exemplifying creative programming for inclusive engagement
- Managed full technical production cycle from conceptualization through on-site installation under real-world constraints

Professional Experience:

Software Engineer | *IT Souls – Vadodara, India | May 2017 - August 2024*

- Mentored junior developers in creative technology architectures, demonstrating capacity for knowledge transfer and pedagogical engagement
- Prototyped innovative IoT and immersive technology solutions integrating AR/VR with interactive media, exploring novel interaction paradigms
- Led development and migration of high-performance mobile applications achieving 99% crash-free stability through rigorous testing methodologies
- Cultivated independence in problem-solving and project organization across diverse technical challenges

Creative Java Developer | *EXPERIENCIOUS – Vadodara, India | July 2015 – January 2017*

- Delivered real-time AR application for Kankaria Carnival engaging 35,000+ participants, demonstrating scalability in public-facing interactive systems
- Developed IoT-based interactive touch wall installation inaugurated by Prime Minister of India, showcasing expertise in embodied physical-digital interfaces
- Led AR exhibition projects for Vibrant Gujarat 2017 incorporating Microsoft Kinect and Web AR, pioneering multimodal interaction approaches for public engagement
- Created commercially successful interactive experiences including Virtual Book application and touch-based kiosks, balancing technical innovation with practical deployment

Java Developer Intern | *IT Souls – Vadodara, India | June 2014 – June 2015*
- Contributed to full-stack web development using Java, building foundational programming and system design capabilities

Key Research-Oriented Projects:

- **Mobile AR for Inclusive Learning:** Developed award-winning iOS AR application using Unity and C# specifically designed for individuals with dyslexia, investigating accessible design principles for neurodivergent users through iterative prototyping. Demonstrated commitment to designing technology for diverse human needs and capabilities.
- **AR Data Storytelling:** Created proof-of-concept AR application visualizing COVID-19 case data geographically, exploring spatial narrative techniques for transforming complex datasets into embodied, comprehensible experiences, applying creative programming to address real-world information design challenges.
- **Narrative VR for Well-being:** Developed therapeutic VR experience in Unreal Engine 5 employing hand tracking, investigating novel forms of narrative interaction and user agency in embodied virtual environments, combining technical implementation with consideration of human psychological experience.
- **Procedural Terrain Generation:** Implemented dynamic virtual environments using noise algorithms in Unity, building computational foundation for visualizing complex topographical and geological data, demonstrating algorithmic thinking and generative design capabilities.

Technical Skills
- **XR Development Platforms:** Unity, Unreal Engine 5, Processing.org, P5.js, Three.js, Android Studio, Lens Studio
- **Programming Languages:** C++, C#, Python, JavaScript, TypeScript, Java, Shell Script
- **XR and Embodied Interaction SDKs:** Meta SDK, OpenXR, ARKit, ARCore, Google MediaPipe, ConvAI, Microsoft Kinect
- **AI & Machine Learning:** Reinforcement Learning, TensorFlow (via Udacity AWS ML & Intel Edge AI scholarship), PyTorch, MediaPipe.
- **Research Methods:** User study design, statistical analysis (ANOVA, mixed-effects models), qualitative research, participatory design, validated assessment instruments (SUS, STAI)
- **Prototyping and Design:** Rapid Prototyping, Usability Testing, Accessibility for Spatial Applications, Agile Methodologies
- **Web and Backend Technologies:** Node.js, Firebase, SQL, Apache Cordova, REST APIs, WebSocket
- **3D and Design Tools:** Blender, Maya, Adobe Creative Suite
- **Source Control and CI/CD:** Git, GitHub, familiarity with CI/CD pipelines

Awards and Recognitions
- Best Heritage Narrative Award, Digital Heritage 2025 Contest, China
- Best AR Project Award, Goldsmiths, University of London
- Udacity AWS Machine Learning Foundation Scholarship
- Intel Edge AI Scholarship Foundation
- Interaction Design Foundation (IxDF) Scholarship