Sam Thompson

sam.thompson.xr@gmail.com | linkedin.com/in/sam-ross-thompson | github.com/Flame1190

Education

University of Cambridge (Trinity College) Cambridge, UK
PhD in Engineering *Oct 2024 – Present*

- Research on embodied conversational agents in social VR, focusing on presence, embodiment, and user behaviour
- Hands-on prototyping and development, experimental design and statistical analysis of user studies
- Funded by the Woolf Fisher Trust and Cambridge Trust
- Co-President, Cambridge University VR/AR Society

University of Auckland Auckland, New Zealand
Bachelor of Advanced Science (Honours), Computer Science *Mar 2020 – Nov 2023*

- Graduated with First Class Honours
- President, University of Auckland VR Club

Experience

Intercollegiate XR (ICXR) International
President *Feb 2025 – Feb 2026*

- Lead an international XR community and executive team, connecting students and early-career researchers

University of Auckland Auckland, New Zealand
Research Assistant (HCI / XR & Software Engineering) and Graduate Teaching Assistant *Mar 2020 – Jul 2024*

- Built various XR applications for experimental studies within the Computer Graphics group
- Contributed as a software engineer to a flood-resilient digital twin, focused on simulation and visualization
- Worked across research and engineering contexts to translate research goals into functional XR systems
- Taught parts of undergraduate and postgraduate courses in ML, theoretical CS and computing education
- Collaborated with interdisciplinary teams across the University of Auckland and the University of Cantebury

Projects

Embodied Conversational Agents | *OpenAI Realtime API, C#, Unity* October 2024 – Present

- Developed an embodied conversational agent (ECA), capable of interacting in real-time, and in standalone, mobile VR headsets

Redirected Walking | *Unity, C#, Blender, Android, Research* 2023 – 2024

- Developed a virtual environment prototype to enable natural walking in XR within a limited physical space

Stereoscopic Super-sampling for XR Devices | *Python, Unity, C#* 2023

- Supported development for a model to reconstruct XR views via neural upscaling
- Developed a custom dataset of colour, depth and motion vector information from stereoscopic views
- Compared results with other state-of-the-art models

Technical Skills

Languages: C#, Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS
Frameworks: Pytorch, p5.js, Processing, .NET, MonoBehaviour
Developer Tools: Git, Unity, Blender, Substance Painter, Visual Studio, PyCharm, IntelliJ, Eclipse, Docker
Libraries: pandas, NumPy, Matplotlib

Technical Skills

- Programming & Development: Unity (C#), Unreal Engine, Git, 3D Rendering and Reconstruction
- XR Technologies: OpenXR, OpenVR, Meta SDK, BasisVR
- Research Methods: VR prototyping, experimental design, user studies, quantitative behavioural analysis