ABSTRAK

Maulana Malik Fajri, NIM 4203550004 (2020). Pengembangan Aplikasi 3D dengan Integrasi Blender dan Roblox Studi Kasus Museum Negeri Sumatera Utara.

Penelitian ini mengeksplorasi potensi teknologi Metaverse dan Ruang Imersif untuk meningkatkan pengalaman wisata virtual di Museum Negeri Sumatera Utara melalui integrasi Blender dan Roblox Studio. Fokus utamanya adalah pengembangan konten metaverse yang kompleks dan interaktif, serta implementasi sistem perhitungan kunjungan adaptif. Metodologi melibatkan pengembangan aplikasi 3D menggunakan Blender untuk pemodelan dan Roblox Studio untuk lingkungan virtual. Hasil utama mencakup penambahan fitur Virtual Reality (VR), perluasan koleksi museum virtual, dan sistem evaluasi berkelanjutan berdasarkan umpan balik pengguna. Kesimpulannya, integrasi Blender dan Roblox Studio efektif dalam menciptakan pengalaman museum virtual yang immersif, membuka peluang baru dalam pemanfaatan teknologi Metaverse untuk meningkatkan aksesibilitas museum dan menawarkan solusi inovatif dalam pelestarian serta promosi warisan budaya melalui platform digital.

Kata Kunci : *Metaverse*, Ruang Imersif, *Blender*, *Roblox Studio*, Museum Virtual, *Virtual Reality*, Pengalaman Interaktif, Warisan Budaya Digital

ABSTRACT

Maulana Malik Fajri, NIM 4203550004 (2020). 3D Application Development with Blender and Roblox Integration: A Case Study of the North Sumatra State Museum.

This research explores the potential of Metaverse and Immersive Space technologies to enhance virtual tourism experiences at the North Sumatra State Museum through the integration of Blender and Roblox Studio. The main focus is on developing complex and interactive metaverse content, as well as implementing an adaptive visit counting system. The methodology involves developing a 3D application using Blender for modeling and Roblox Studio for the virtual environment. Key results include the addition of Virtual Reality (VR) features, expansion of the virtual museum collection, and a continuous evaluation system based on user feedback. In conclusion, the integration of Blender and Roblox Studio proves effective in creating immersive virtual museum experiences, opening new opportunities in utilizing Metaverse technology to increase museum accessibility and offering innovative solutions for preserving and promoting cultural heritage through digital platforms.

Keywords : Metaverse, Immersive Space, Blender, Roblox Studio, Virtual Museum, Virtual Reality, Interactive Experience, Digital Cultural Heritage