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Virtual Zoo: Immersive Digital Wildlife

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Abstract: *The continuous evolution of digital technologies has allowed the creation of immersive environments that replicate real-world experiences with increasing accuracy and interactivity. This research paper explores the design and development of a Virtual Zoo—a project undertaken by a team of five engineering students over the past few months. The project aims to replicate a realistic zoo environment digitally using modern tools such as Unreal Engine 5 for 3D modelling and rendering, and web development technologies including HTML, CSS, JavaScript, PHP, and MySQL for user interaction and data handling. The Virtual Zoo serves both an educational and recreational purpose, providing users the opportunity to explore life like animal habitats and learn about different species through a web-based interface. This paper details the project's objectives, system architecture, development process, encountered challenges, and future prospects*

Keywords: Virtual Reality, 3D Simulation, Interactive Learning, Wildlife Visualization

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