

This thesis describes an approach to creating a GPU-based rendering system for an evolution-simulating and data-based game in Unity DOTS. The game features a vast array of diverse creatures that are unknown in advance and must be assigned a visualization on the fly. We aim to identify possible methods for generating these specific visualizations within a high-performance environment using Unity DOTS. We also implement an algorithm designed to create an aesthetically pleasing visualization of the content. The result of this work offers a possible solution to use a combination of GPU-based procedural generation and a data-driven approach to create dynamically generated game content that maintains high performance. This work enables the development of specific types of games with high visual demands. The output of this solution will broaden the horizons in the world of procedural generation of game visuals and thus help development teams that do not have a large number of game artists at their disposal in the graphical side of the game.