

*Animations are present everywhere, from games to electronic billboards encountered in everyday life. In recent years, there has been an effort to reduce the complexity of writing code while preserving human creativity and intent, a motivation that extends to CSS animations in modern web development. Although AI-based tools claim to automate this process, they often fail due to an inability to capture precise animation behavior expected by non-technical users.*

*To address this problem, we propose a structured approach to simplify the creation of CSS animations through GameScript, a domain-specific language (DSL) that serves as an abstraction layer for animation authoring. Rather than relying on direct CSS manipulation, animation behavior is described at a higher level and translated into executable CSS constructs.*

*GameScript was originally designed for developing games such as Asteroid Destroyer and Tetris, where system behavior depends on repeatability, explicit rules, and time-driven execution. Owing to these properties, it is interpreted in this work within the web domain rather than being restricted to game development alone.*

*The proposed system does not seek to replace manual CSS animation coding but functions as a generator that produces CSS code with ease. It focuses on smooth animation curves, interaction states such as hover, focus, and active, and inherent behavioral relationships, including group and peer-based logic and property transformations over time.*

*Despite its strengths, the framework exhibits limitations. Certain CSS features, particularly grid-based layouts, remain unreachable due to the behavioral nature of GameScript and the mismatch between spatial layout representation and time-based rule evaluation.*

*The system architecture consists of a parser, a sampling engine, a semantic interpreter, and a dedicated time layer. This time layer enables controlled temporal evolution, allowing high-level rules to be interpreted and transformed into CSS animations in a consistent and predictable manner.*