

Magic is a popular element in current computer games. Although most games spoil the sensation of magic as of something extraordinarily subtle by allowing the player to cast spells by simply hitting key combinations, several games require the player to finish a more complicated action before casting a spell: Drawing a complicated glyph that represents the spell is one of such actions. This thesis aims to provide a repurposable library that would allow simple implementation of structured glyph-drawing-based in-game spell systems. The thesis studies several relevant approaches to pattern recognition, describes a neural-network based method for recognition of various shapes and shape combinations, develops a system for describing the parameters and results of the used algorithm in terms of predefined spell shapes and their recognized combinations, and implements this approach in a library and an accompanying simple demonstrational game. The library and its parameters are benchmarked and systematically optimized.