## Fall 2018 CS7180 Final Project Report

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## **Abstract**

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## **Introduction Background**

Reinforcement learning has been widely used to successfully solve a variety of games. Doom is a classic First-Person Shooter (FPS) game from 1993 created by Id Software. As one of the first FPS games to market, it is simple in its game-play in comparison to anything modern, but is still significantly more complex than many other Atari games, such as Pong. In Doom, the user can move, attack, and pick up items and the game state may not be completely visible at all times and obstacles often partially obscure the display. These complexities make Doom an interesting study for reinforcement learning while in this project we focus on the simple case of the user encountering a single adversary in a match.

Related Work
Project Description
Experiments
Conclusion