# Transfer Learning with FlappyBird

## Cedrick Argueta

Department of Computer Science Stanford University Stanford, CA 94305 cedrick@cs.stanford.edu

## **Austin Chow**

Department of Computer Science Stanford University Stanford, CA 94305 archow@stanford.edu

#### Cristian Lomeli

Department of Computer Science Stanford University Stanford, CA 94305 clomeli@stanford.edu

#### **Abstract**

Reinforcement learning's growth in popularity in recent years is partly due to its ability to play some video games with a level of mastery that no human can reach. In this paper we apply transfer learning to the popular video game *FlappyBird* and analyze its performance to traditional reinforcement learning algorithms.

- 1 Introduction
- 2 Approach
- 2.1 Expected Behavior

Austin, give input output behavior

2.2 Infrastructure

Cedrick, describe keras-rl and ple

2.3 Baseline and Oracle

Cristian, define baseline and oracle

3 Challenges