Literature review: Side Scrollers

The use of a side-scroller for the testing of machine learning techniques is well established, the *Mario AI Championship* used a version of Infinite Mario as a test environment for competing AI agents. The Championship tested AI in different “tracks” including “Gameplay”; how far an agent could traverse, and “The Turing Test”; to identify the most convincing human-like agents (Togelius et al., 2013). A benchmark and API for Infinite Mario which allows AI to be compared and tested (Karakovskiy and Togelius, 2012).

In the design of the Side Scrolling game produced through which to train the agents, a level of complexity similar to that of Lee et al. produced in their simplified version of *Super Mario* mentioned earlier (2014). The player can navigate the level through moving left and right as well as jumping, double jumping, a mid-air dash, and a stomp.