**Project Proposal**

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**Section #:** 11086

**Rock, Paper, Scissors**

For the semester long project, I would like to create an AI agent who battles a human player in Rock, Paper, Scissors. My initial plan is to create a web page where the user selects their choice of either Rock, Paper, or Scissors and the AI agent selects an outcome based off previous player choices. If I can get this to work, I would also like to use some hardware devices, such as a Raspberry Pi and a camera, to create a physical machine that players will battle. I would need to create a computer vision program that reads what sign the users’ hand is making but the AI agent would remain the same. To display the agent’s response my initial thoughts are to use some sort of display screen or audio.

The data source for this project would be the human’s selection. When doing the CV portion, I will have to scrape the web for many different pictures of human hands making the Rock, Paper, and Scissors shapes for training purposes.

I found this project on Kaggle and found a rough example of what I want to create. The links for these are listed below.

* <https://www.kaggle.com/c/rock-paper-scissors>
* <https://www.afiniti.com/corporate/rock-paper-scissors>