**Report on Daily Progress**

June 1, 2023

Today, I spent time reading and comprehending the paper "Decision Field Theory: A Dynamic-Cognitive Approach to Decision Making in an Uncertain Environment" by Busemeyer and Townsend. This work provided me with a core understanding of DFT, with a focus on the concept of the accumulation of subjective assessments of alternatives and the concept of a threshold criterion.

June 2, 2023

Tversky and Kahneman's "Advances in Prospect Theory: Cumulative Representation of Uncertainty" was the subject of my day's research. The research gave me valuable insights on cognitive biases in financial decisions, demonstrating how these biases could influence an investor's decisions.

June 3, 2023

"A Deep Reinforcement Learning Framework for the Financial Portfolio Management Problem" by Jiang et al. continues my deep investigation into the literature. Their implementation of reinforcement learning in finance was both informative and motivating.

June 4, 2023

After finishing Jiang et al.'s work, I began to notice interesting avenues for designing a reinforcement learning system for my project. Their application of a deep deterministic policy gradient (DDPG) method stood out as a viable solution, inspiring me to investigate similar strategies.

June 5, 2023

Today was spent securing and beginning a first assessment of a dataset comprising historical stock transaction data from the previous ten years. The dataset, albeit extensive, required cleaning and organization before it could be used effectively in the algorithm.

June 6, 2023

Today, I started describing the design of the reinforcement learning algorithm, building on DFT expertise and insights into cognitive biases from my studies.

June 7, 2023

I continued to fine-tune the preliminary design of the reinforcement learning algorithm, incorporating features of DDPG but leaving flexibility for changes to reflect investor risk tolerance. Along with this, I completed some data cleaning procedures to ready my dataset for use.

June 8, 2023

Today, I had a fruitful talk regarding reinforcement learning with Professor Stephen. His comments and the materials he gave will be critical in exploring alternatives for my algorithm design approach. Following our talk, I started working on the rough design of the reinforcement learning algorithm. Furthermore, I continued my research of the literature on cognitive biases in financial decision-making, focusing on "Cognitive biases, risk perception, and individuals' financial decisions" by Lopes and Sanvicente.