

## **Progress Report for Week 3**

### Important Achievements:

**Data Cleaning:** This week, data cleaning activities moved along steadily, with 60% of the targeted financial and behavioral datasets now processed and prepared for the next phases of our work.

The successful encoding of certain fundamental cognitive biases into our preliminary reinforcement learning model this week represented another milestone in algorithm development and provided strong evidence for the feasibility of our conceptual framework.

**Data Analysis:** We started by mapping data patterns to particular cognitive biases described in the body of existing literature. This was our first round of data analysis. For the future improvement of the model, this exercise has given us useful information.

**Data collecting:** In order to get a more comprehensive view of investor behavior and related cognitive biases, we increased the scope of our data collection operations.

**Review of the Literature:** In order to keep our model in line with the most recent findings in science, more study was done to keep clarifying our understanding of cognitive biases inside the reinforcement learning framework.

### Challenges Suffered:

**Algorithm Complexity:** Despite progress, it is still difficult to include more sophisticated cognitive biases into our model. Finding a depiction that is both accurate and useful is still a challenge for us.

**Data Cleaning Pace:** While progressing, the data cleaning procedure has taken longer than anticipated, slightly slowing down our progress.

envisioned next steps

Finishing the data cleaning process will be the top focus for the upcoming week in order to make it possible for the algorithm to quickly use all of our datasets.

**Algorithm Improvement:** We will work to make the reinforcement learning algorithm even better with the express purpose of incorporating more cognitive biases.

**Advanced Data research:** We will go deeper into the data to find additional patterns and correlations to cognitive biases, building on our first research.

Expanded Data Collection: To better capture a wide range of cognitive biases, we want to significantly expand our data pool by locating and acquiring additional statistics on investor behavior.

Research on the Intersection of Cognitive Biases and Reinforcement Learning: We intend to evaluate more research on this topic in order to maintain our model up to date with academic findings.

The progress we made this week is encouraging, despite the obstacles we faced. Our main objective of creating a reliable reinforcement learning system that is cognition bias aware is being slowly attained. We have a clear plan for our next actions, and we're determined to keeping up the momentum.