Weekly Project SCRUM Report

Date: Week 2

Project Name: Drift Diffusion Models of children's interactions in a Repeated Prisoner's Dilemma Game

Team Members: Team 2
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Tasks Completed this week:

- researched drift diffusion models; acquired greater theoretical understanding, as well as found a python package to implement it
- separated response times for cooperation and defection, observed their distributions
- graphed averages for both on the same plot against several explanatory variables (age, education, income, gender, total problems, aggression, bully, victim, IBS total)
- observed trends and gained some insights into variables of interest, that would also be interesting to client
- calculated relative response time averages (coop/defect) per twin and added to dataset
- calculated relative counts (coop/defect) per twin and added to dataset
- plotted relative rt and relative count against the explanatory variables mentioned earlier
- ran regression with scikit-learn to predict relative decision count from relative response time
- plotted predicted values against actual values

Plans for next week:

- consider doing some outlier analysis and potentially eliminating some twins with extreme response times
- calculate response time for different sets of decisions: (twin in current round; partner in past round) C;C, C;D, D;C, D;D
- run some more regressions, ideally including multilinear
- continue researching DDM theory and implementation

Obstacles and Questions:

- Determining the response variable to predict, and at what level (per twin, per some category, per average)
- Outliers may potentially be skewing some measures
- Is there a useful way to apply classification models to this data?

Next meeting with client on Friday the 19th.