Analyzing Drug Refusal Behaviors Among At-Risk Young Teens

Team Name: Abnormal Distribution (E14)

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I. At-risk young teens have least refusal power to drugs

- Refusal Mini Game ≈ real-life behavior
- Metric:
  \[
  \text{Refusal Power} = \frac{\text{Sum} (\text{Opponent Point Loss})}{\text{Total Rounds}}
  \]
- Group into three topics
- Performed worst in DRUG-topic refusal games: High Variance, Low Mean

II. Thought ≠ Behavior

Teens think the easiest health goal is drug

III. Aspirational avatar of money, hobby, and friend are the most significant features to analyze the young teen’s ability to refuse drugs

Random Forest Gini Feature Importance

Multiple Linear Regression

\[
\begin{align*}
\text{Money}_1 &= 0.02 \\
\text{Hobby}_1 &= 0.04 \\
\text{Friend}_1 &= 0.07
\end{align*}
\]

Histogram of refusal power in drug topics shows opposite result

Note: Models use data in drug topic games only
IV. What types of teenagers have lower refusal power to drugs?

→ **Select above types of teenagers data** to examine the overlapping response to “Who I am”

→ **Display most frequent words others use to describe them**

V. Insights

- **Include more drug-related topics** refusal games (currently have two). Teens are lack of awareness about the difficulty to refuse drugs.
- **Encourage users to finish “Me Power”** profile and carefully design questions with indicative choices. Avatar features can reflect refusal power.
- **Give more attention to above types of teens**: they might have more hard time refusing drugs.