

Drug Consumption and Personality

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The Data

1885
respondents

7
personality
features

18
drugs

Personality Traits

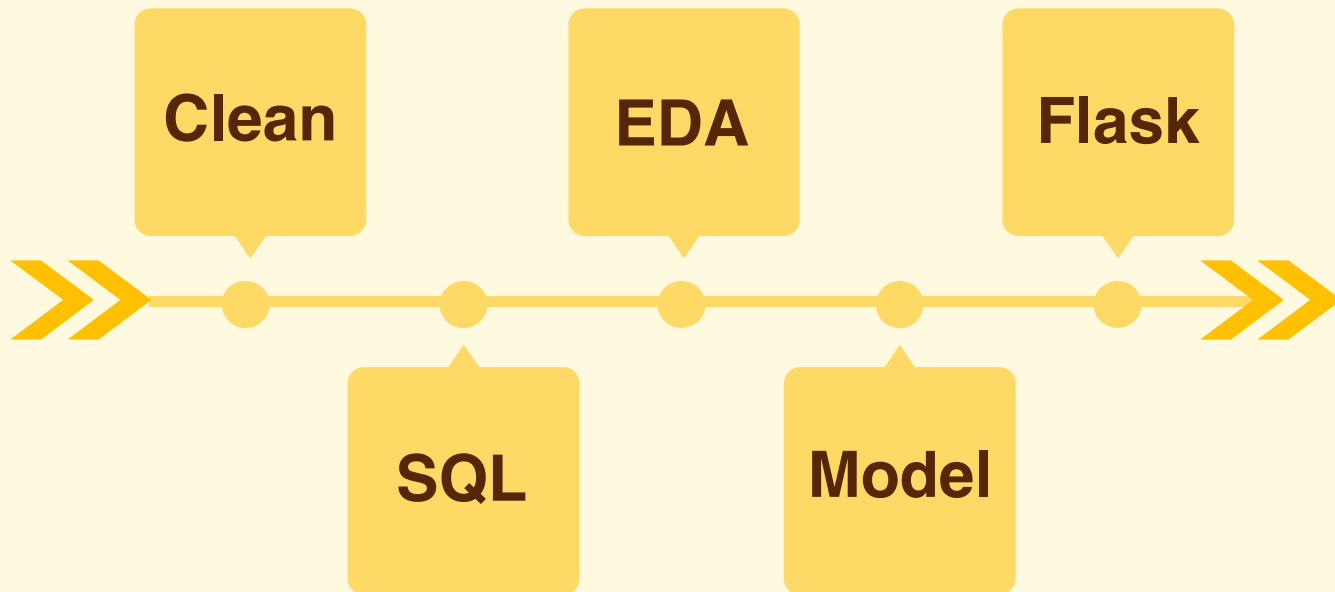
| | | | | | | |
|-------------|--------------|------------------------|---------------|-------------------|---------------|-------------------|
| N | E | O | A | C | I | SS |
| Neuroticism | Extraversion | Openness to Experience | Agreeableness | Conscientiousness | Impulsiveness | Sensation Seeking |

Assumptions

Only modelling usage in past month

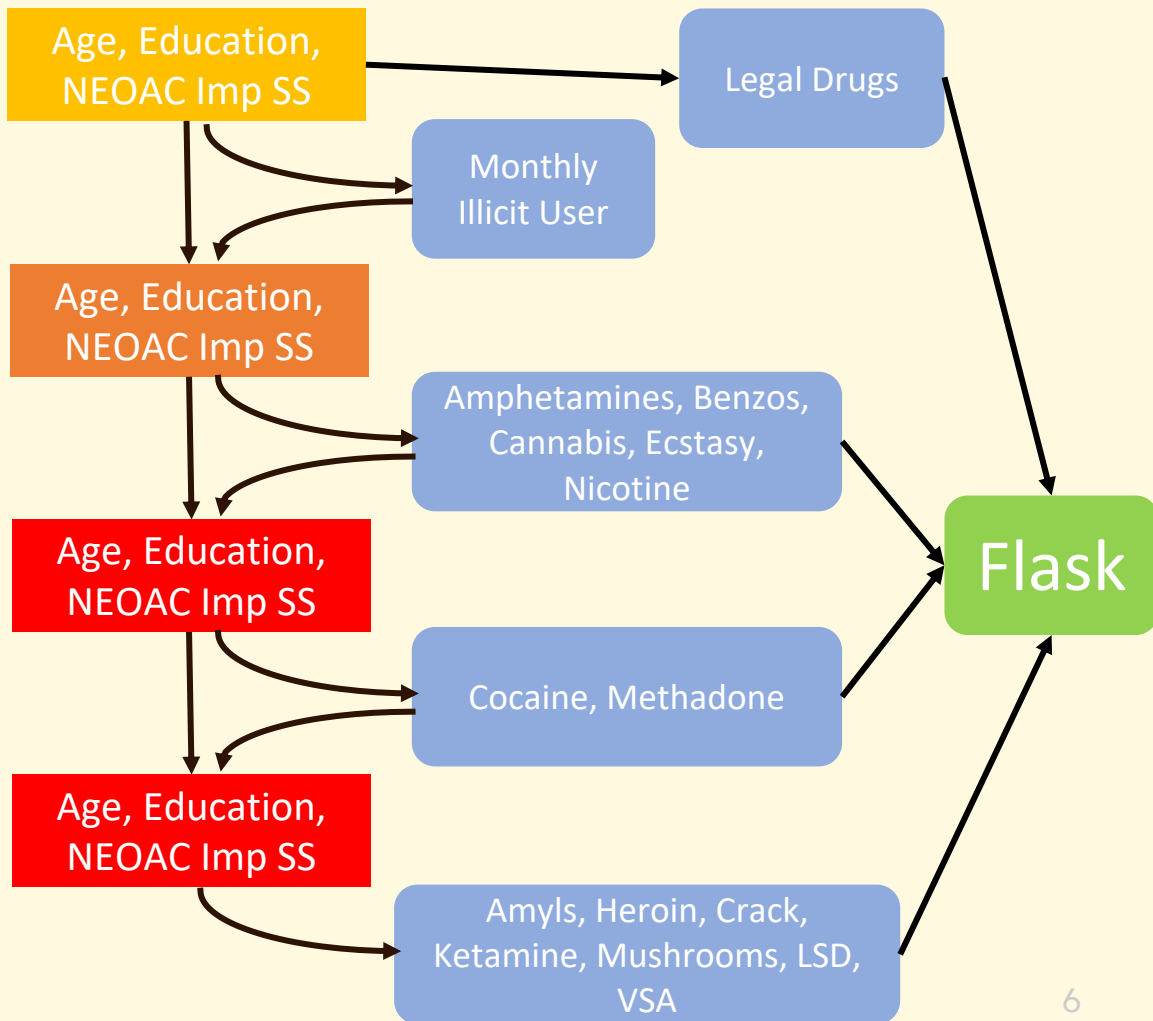
Only valid for white British and American people

Process

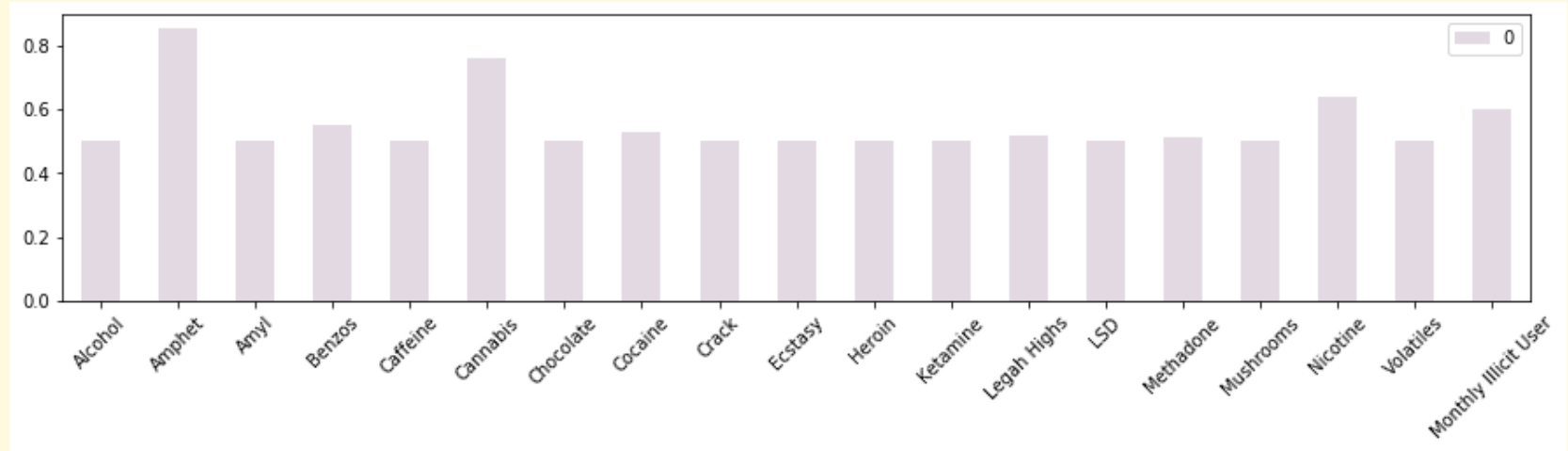


Model Network

- XGBoost (for accuracy and speed) optimized with RandomSearchCV, scored on ROC
- Four levels, each passing more data into features



ROC scores for each drug classifier



dry-stream-60533.herokuapp.com/

Check out the app

Future Work

- Ensemble methods like stacking
 - Larger variety of models
 - Change network architecture



Appendix

Correlations between features

High N = Low E

Neuroticism and Extraversion are inversely correlated

Low A = Low C

Low Agreeableness corresponds to low Conscientiousness

High E = High C

Extraversion and Conscientiousness are directly correlated

Credits

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