Personality & Drug Use

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Introduction

- **Who we are:** Part of an international network of Drug information centers

- **What we aim for:** Prevention of drug abuse

- **What we do:** Research on drug abuse and risk factors

- **Who you are:** CEO of an international company

- **What you aim for:** Determination of *high risk* employees

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Main question

Are there specific **personality traits** and **demographic features** which make individuals to belong to the *high risk* group of drug abuse?

Today´s Agenda

1 Leading questions and basic terms

2 Analysis-Approach in short

3 Findings

4 Limitations & future work

5 Summary

6 Possible prevention methods

Leading questions and basic terms

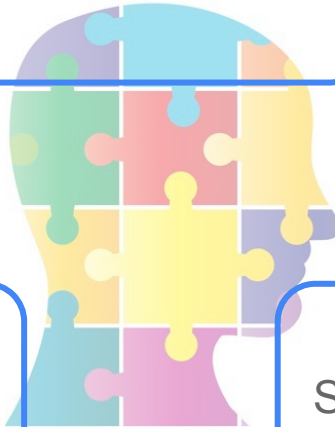**Personality Traits**

Neuroticism
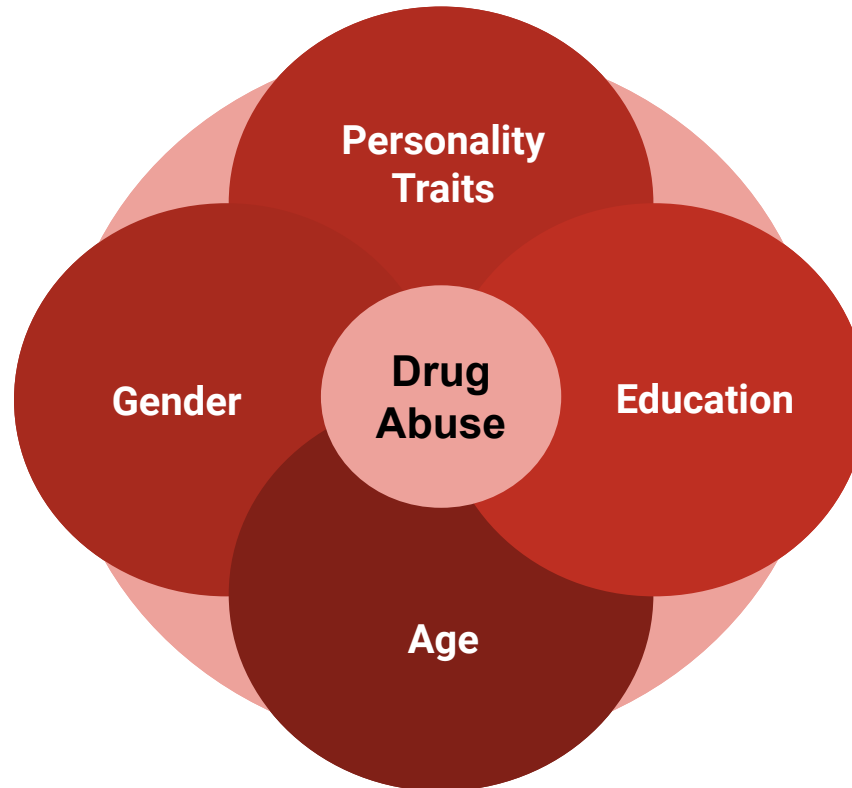
Openness

Extraversion

Agreeableness

Impulsiveness

Conscientiousness

Sensation Seeking

Leading questions and basic terms

Analysis-Approach in short

1 Description of Dataset & Assumptions

1885 observations, Demographic data, Personality traits scores, Usage of different drugs

2 Data Cleaning

Renaming columns, Excluding Semer variable, decoding of data

3 Handling of drug data

Excluding chocolate&caffein, Assigning different drugs into categories (illegal vs legal drug), Binary classification of users and non-users

4 Checking Assumptions

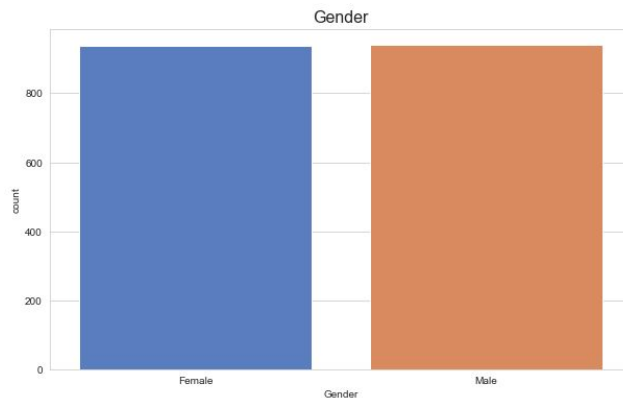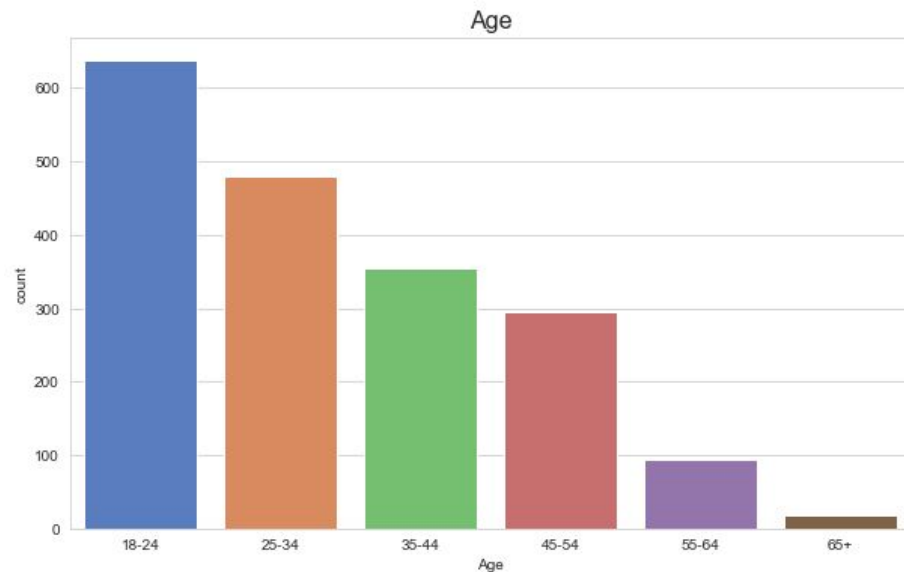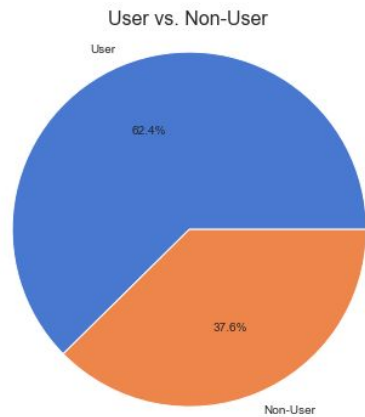First approach of identifying dependencies of features and drug abuse

5 Modeling

Model for predicting drug abuse with personality traits, gender, age and education as features
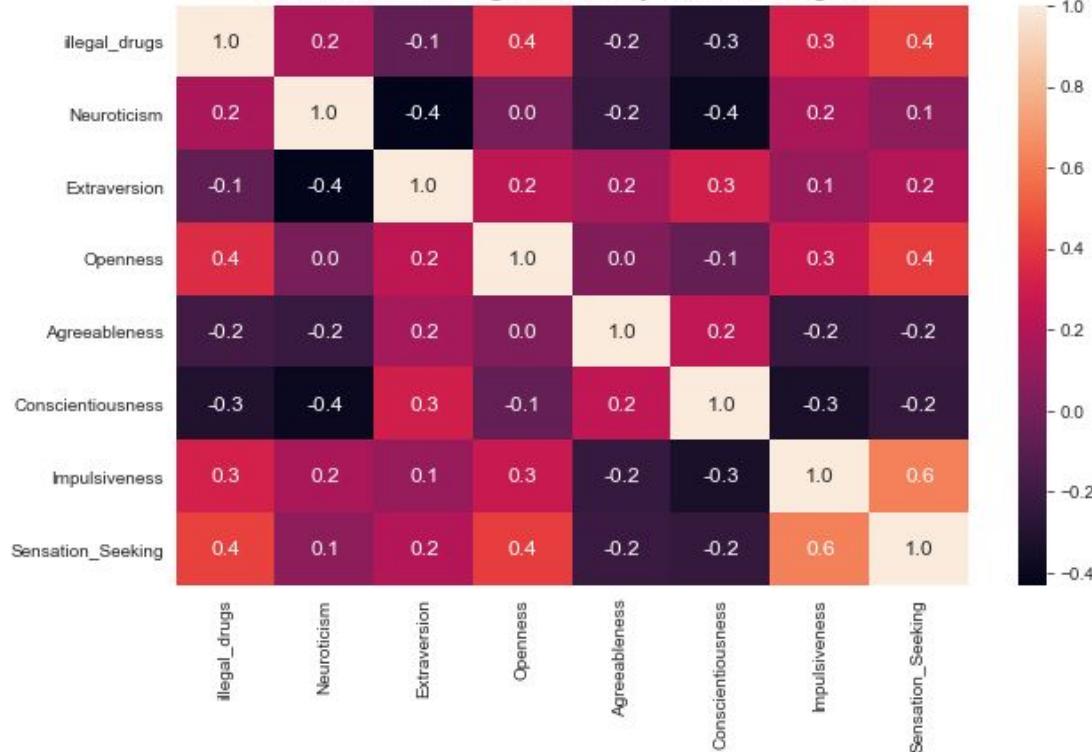
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Findings - The dataset

Findings - Personality Traits and Illegal Drug abuse

Correlations among Personality Traits & Drug Use

Trait	corr	p
Neuroticism	0.172	0.000
Extraversion	−0.072	0.002
Openness	0.363	0.000
Agreeableness	−0.182	0.000
Conscientiousness	−0.305	0.000
Impulsiveness	0.319	0.000
Sensation_Seeking	0.437	0.000

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Findings - Education and Illegal Drug Abuse

Illegal drug abuse and Education
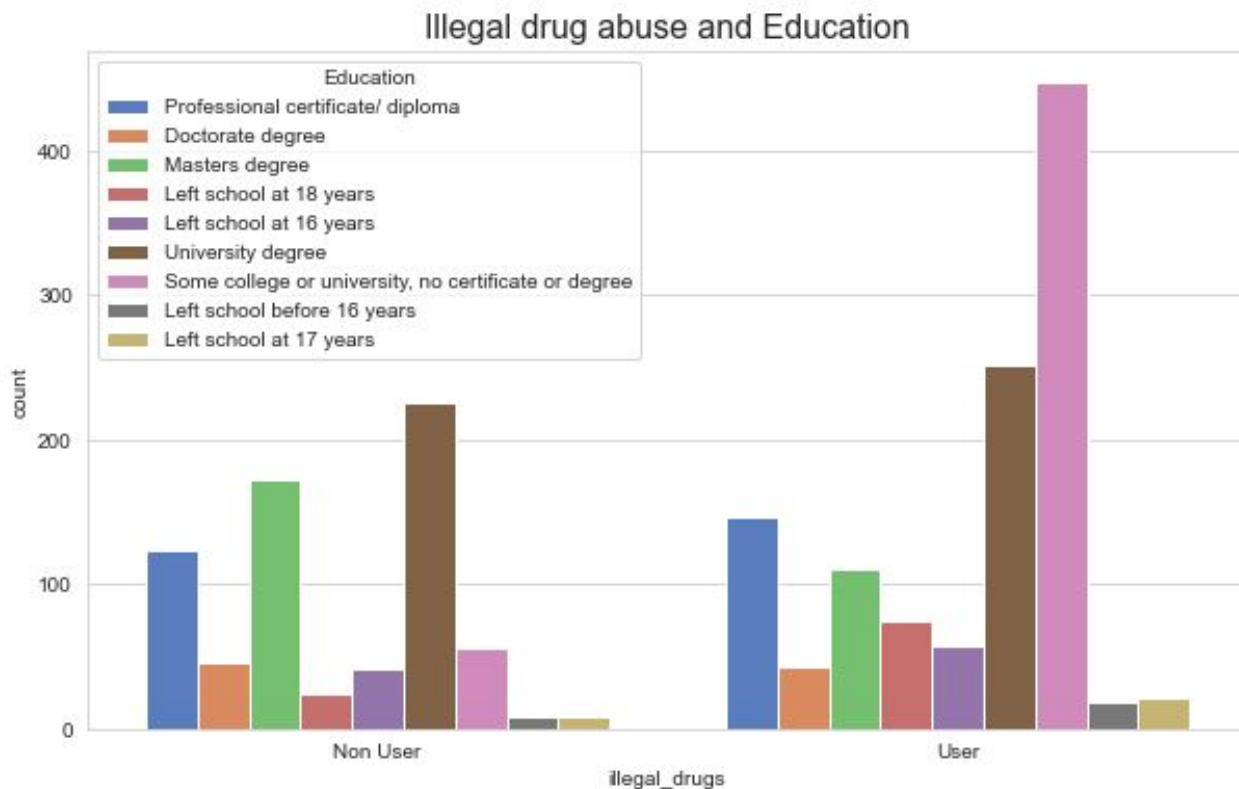
Findings - Age and Drug Abuse

Illegal drug abuse and age
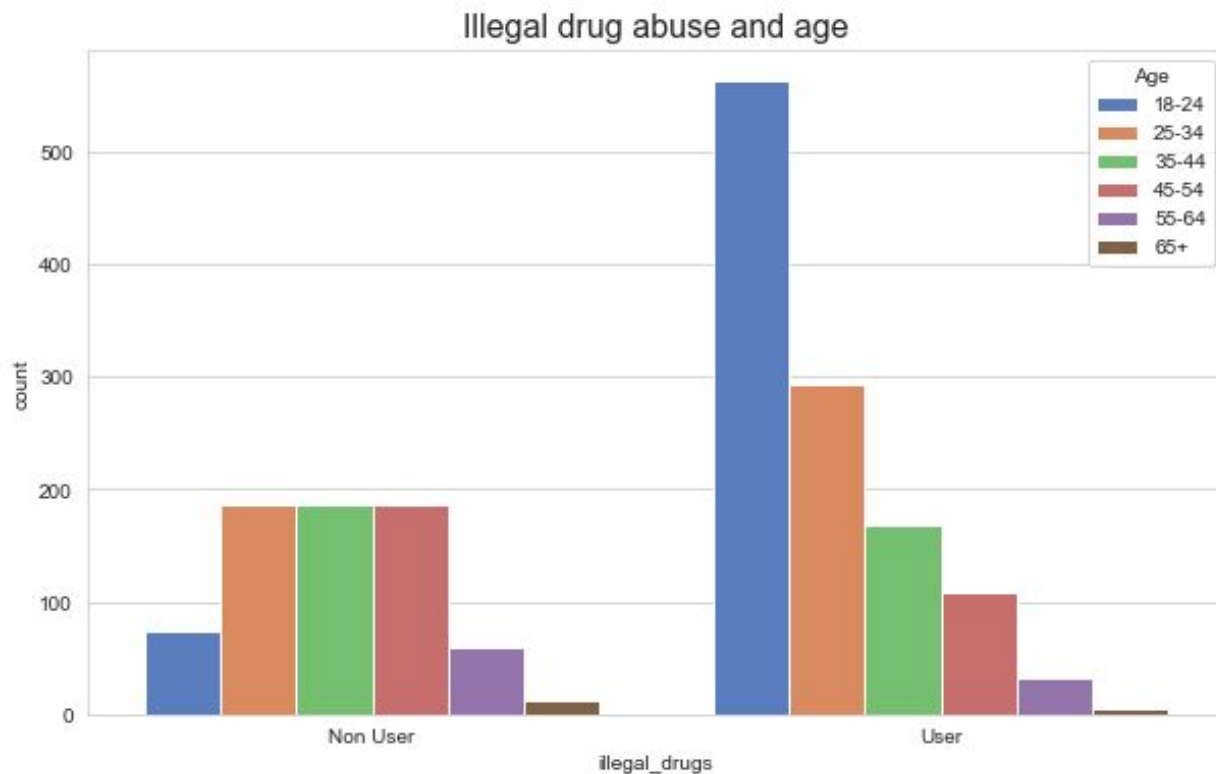
Findings - Gender and Drug Abuse

Gender differences in personality traits

Trait	t	p
Impulsiveness	7.448	0.0
Openness	5.847	0.0
Sensation_Seeking	11.010	0.0
Conscientiousness	-8.033	0.0

Illegal drug abuse and Gender
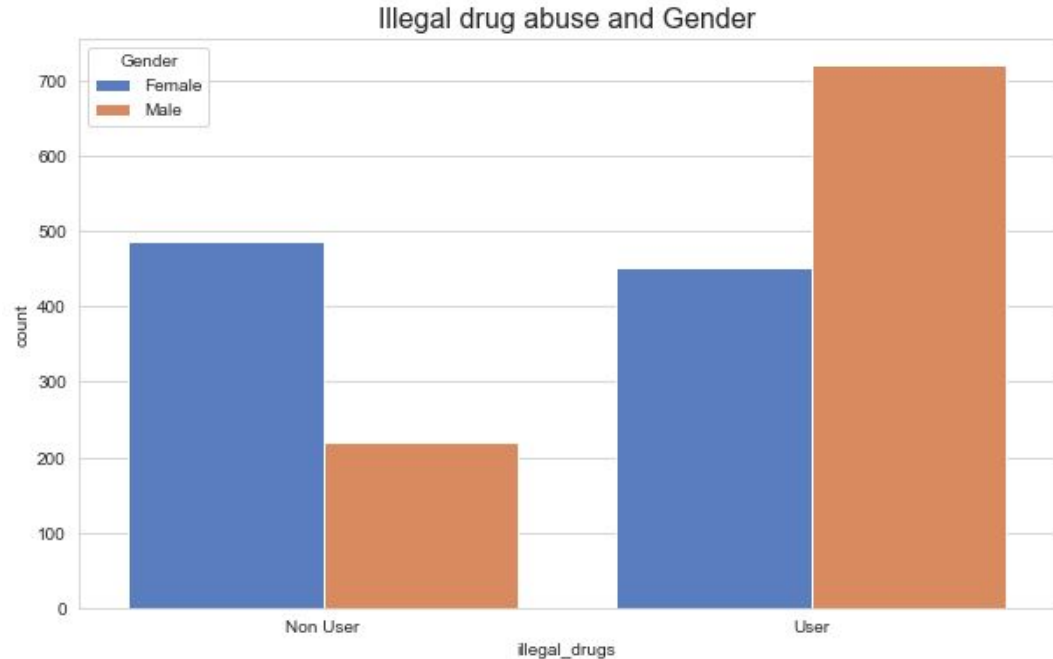
t-statistic = 13.309 p-value = 0.0000

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Findings - Final model
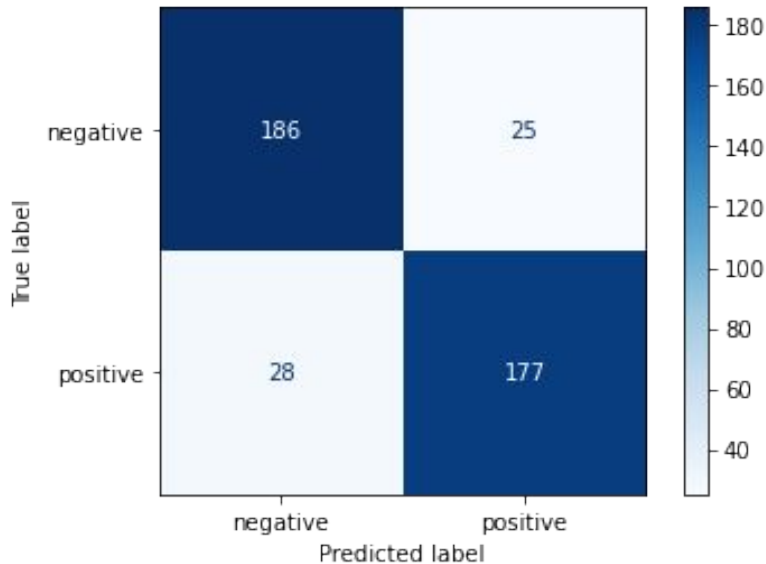
Normalized Weights for First Five Most Predictive Features

Random Forest
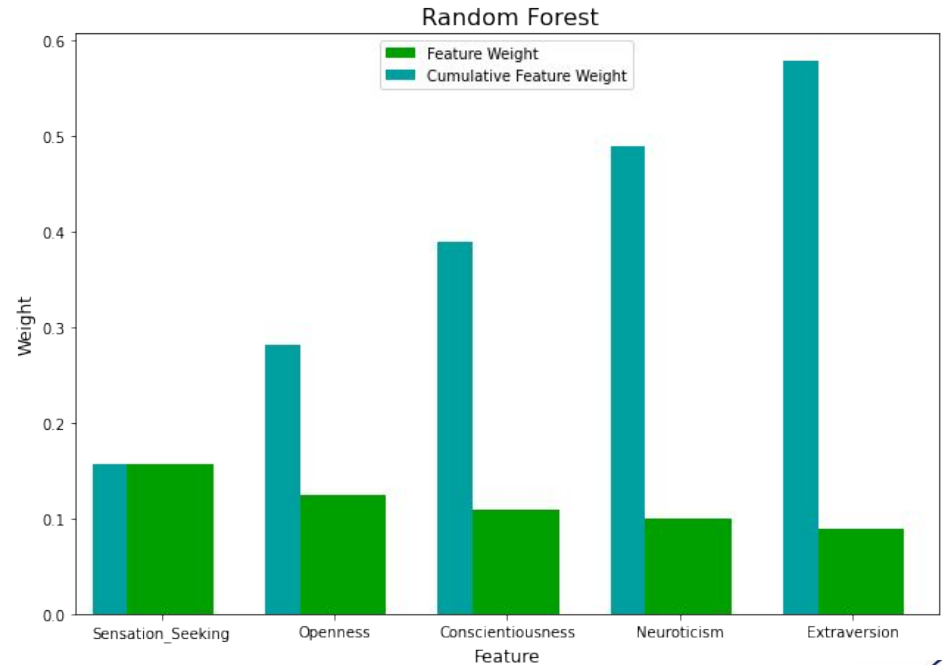
Limitations & future work

Drug abuse is a high **complex** social and psychological problem

There are **many other factors** which play a role and are not covered in this model

Did not include ethnicity in order to prevent racism

High risk of **abuse** regarding the insight we offer

Only **illegal drugs** were included

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Summary

Males are more likely to use drugs in their lifetime

The **younger** a person, the **higher** the risk of drug use

Education is **not a protective** factor

Sensation Seeking, Openness, Conscientiousness, Neuroticism and Extraversion seem to be the **strongest factors** in the model

Risk groups

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Possible preventions methods

Transparent talk about drugs

Promote open discussions

Involve your corporate health management

Offer and promote alternative activities in your company (sports etc.)

References

Images

https://images.app.goo.gl/rhrg2jHPsY8sC5Vh9

https://images.app.goo.gl/9AkiywVKndvpdK2L7

https://images.app.goo.gl/z34GcsgwoaUBMbqc6

https://images.app.goo.gl/iMT9g8SEwhzXnRV58

https://github.com/kevintomas1995/Personality-and-Drug-use

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