

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
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- **Who you are:** CEO of an international company
 - **What you aim for:** Determination of *high risk* employees

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

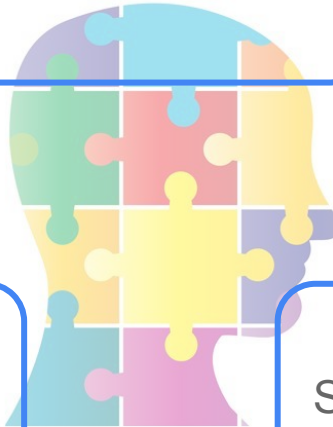
Extraversion

Agreeableness

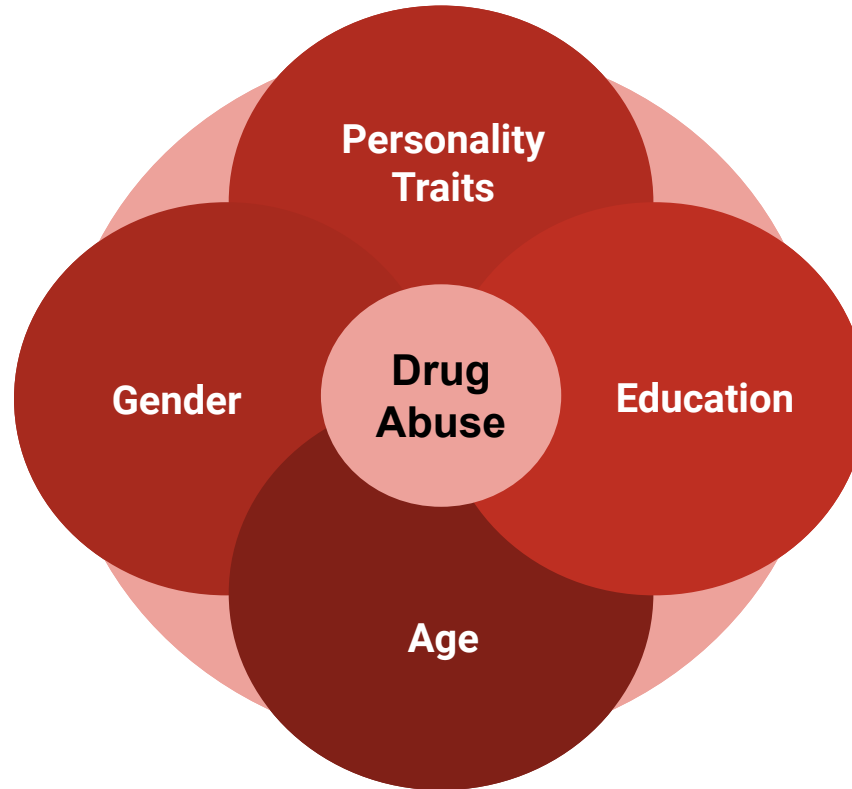
Impulsiveness

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 Semeer variable, decoding of data

3

Handling of drug data

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

4

Checking Assumptions

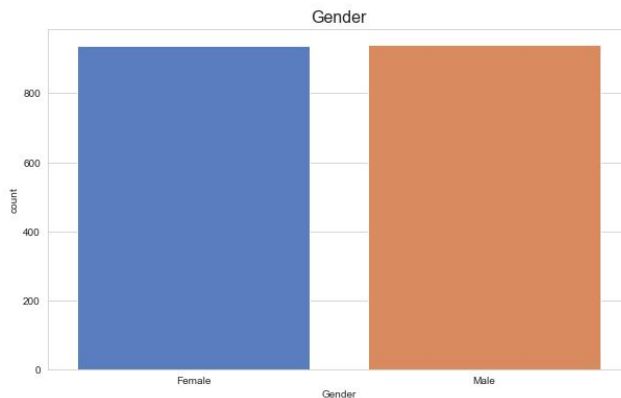
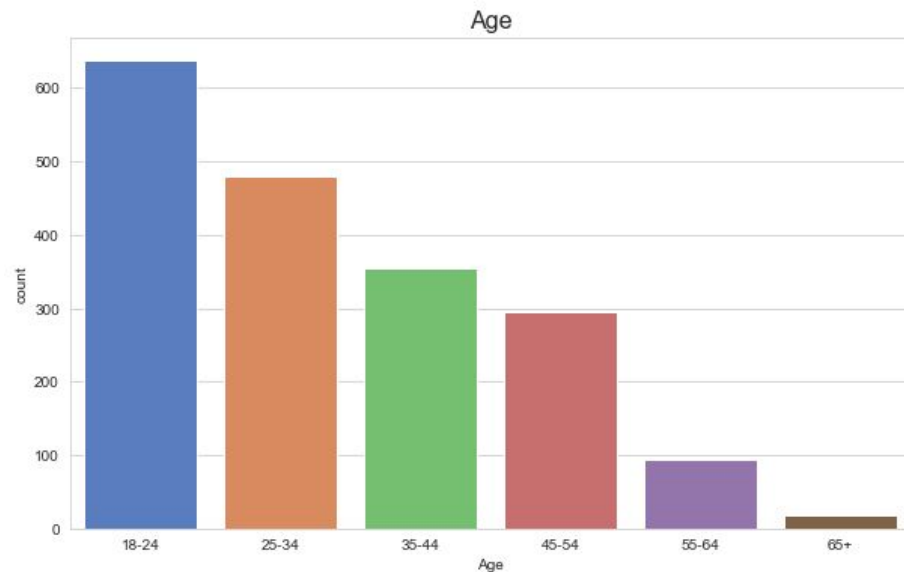
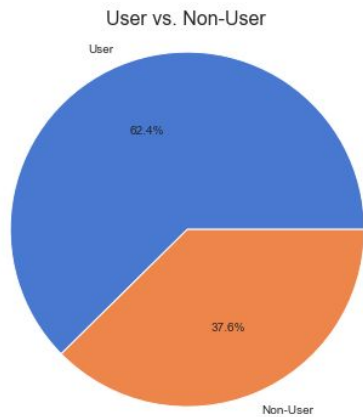
First approach of identifying dependencies of features and drug abuse

5

Modeling

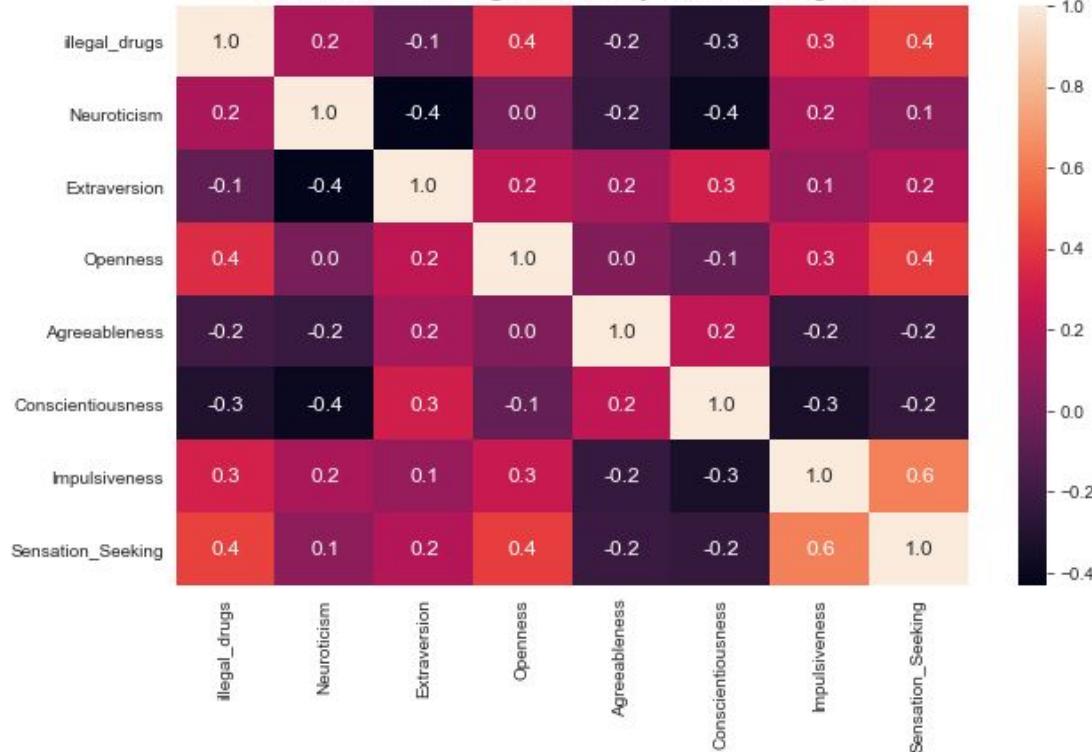
Model for predicting drug abuse with personality traits, gender, age and education as features

Findings - The dataset



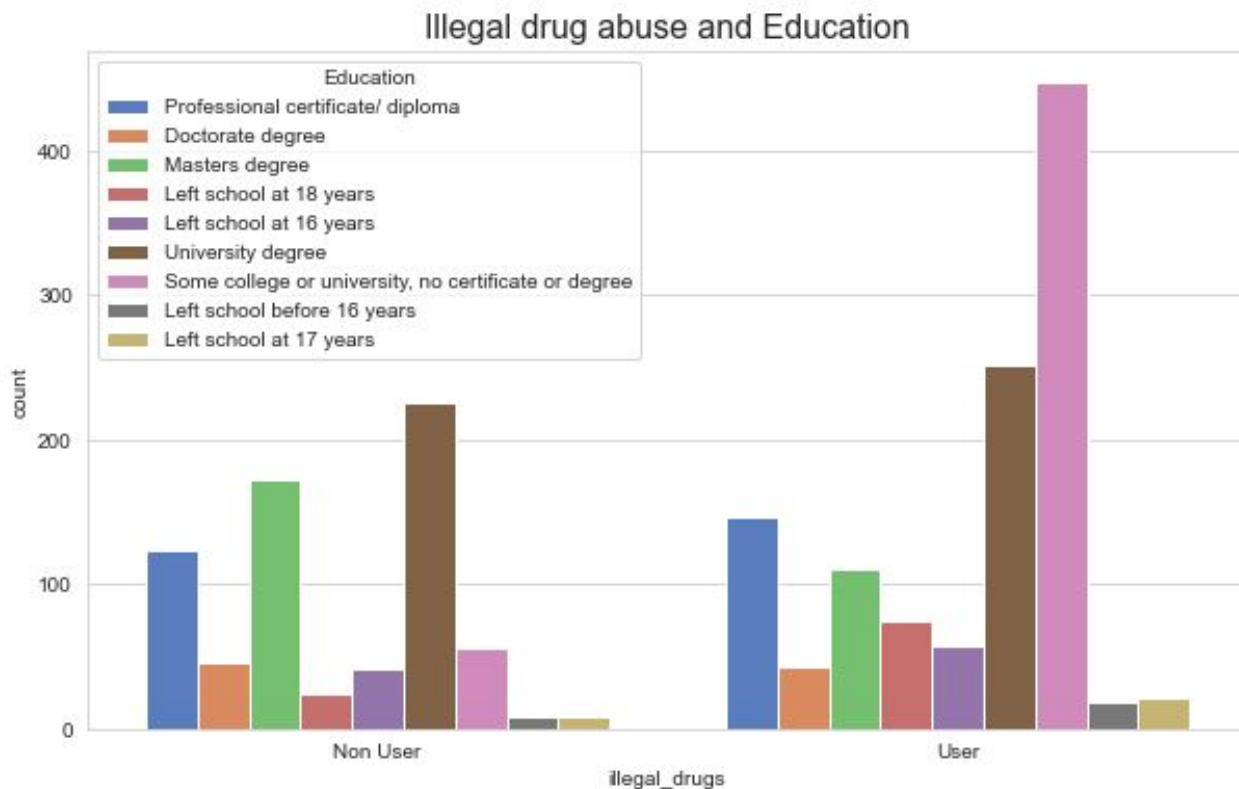
Findings - Personality Traits and Illegal Drug abuse

Correlations among Personality Traits & Drug Use

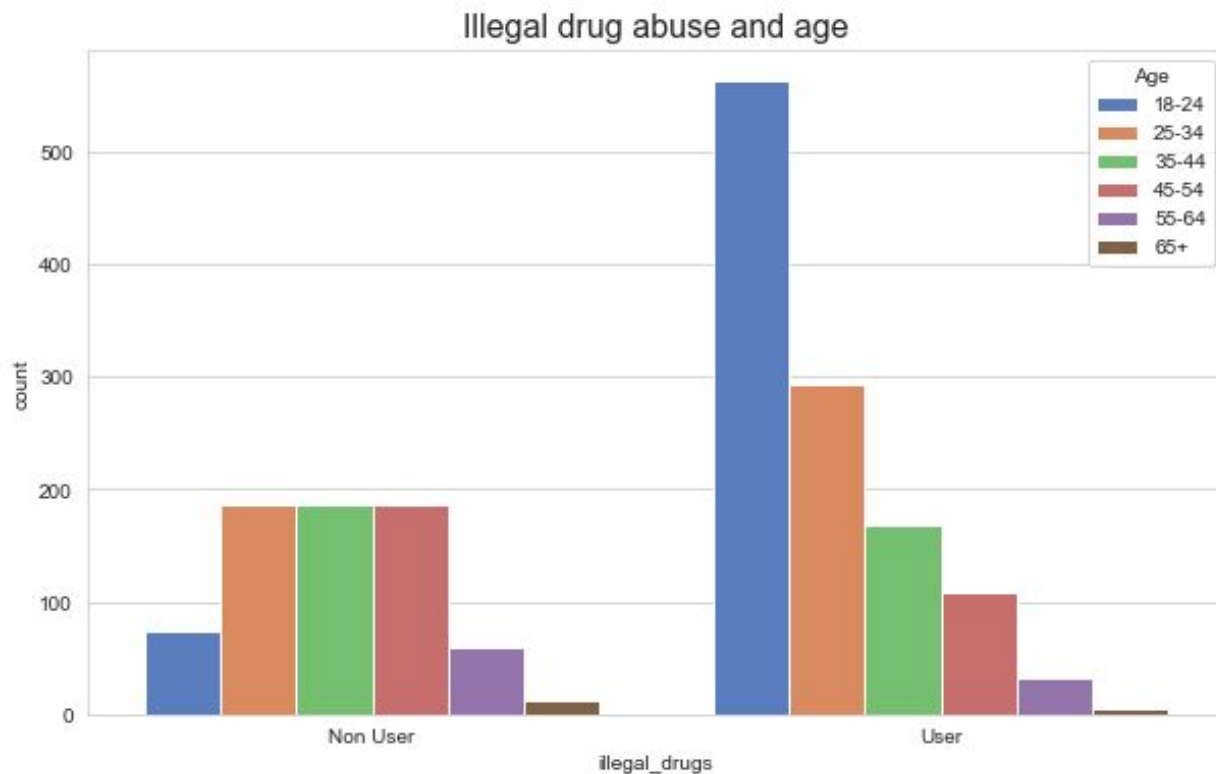


Trait	corr	p
Neuroticism	0.172	0.000
Extraversion	-0.072	0.002
Openness	0.363	0.000
Agreeableness	-0.182	0.000
Conscientiousness	-0.305	0.000
Impulsiveness	0.319	0.000
Sensation_Seeking	0.437	0.000

Findings - Education and Illegal Drug Abuse



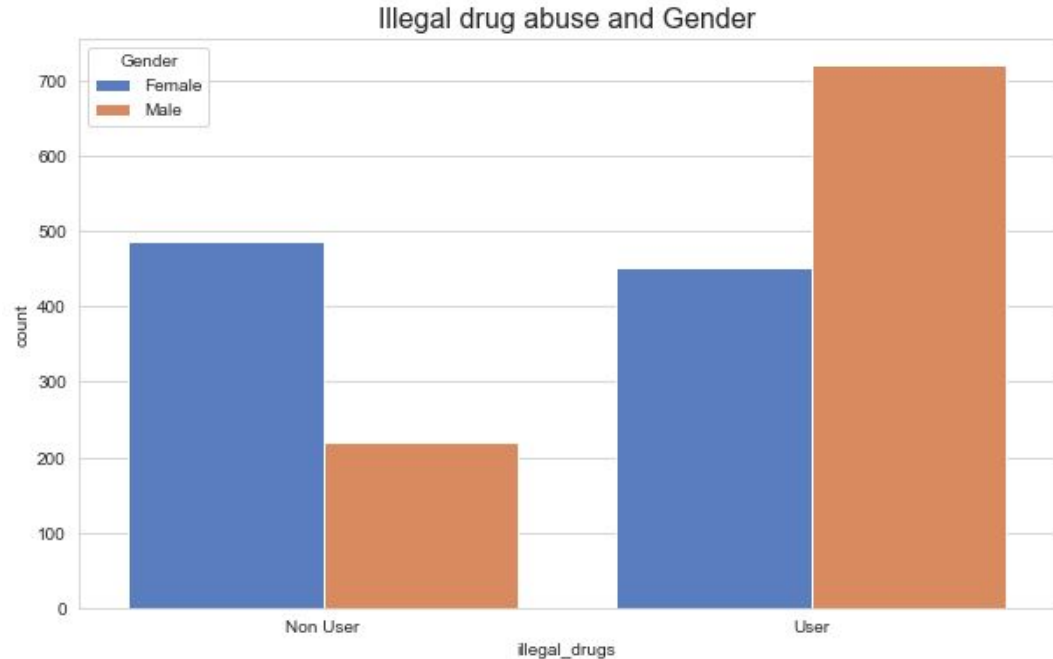
Findings - Age and Drug Abuse



Findings - Gender and Drug Abuse

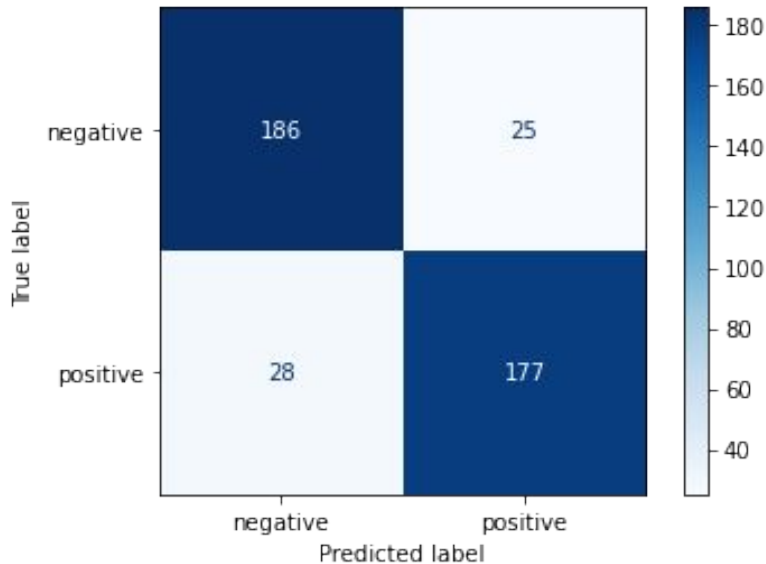
Gender differences in personality traits

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

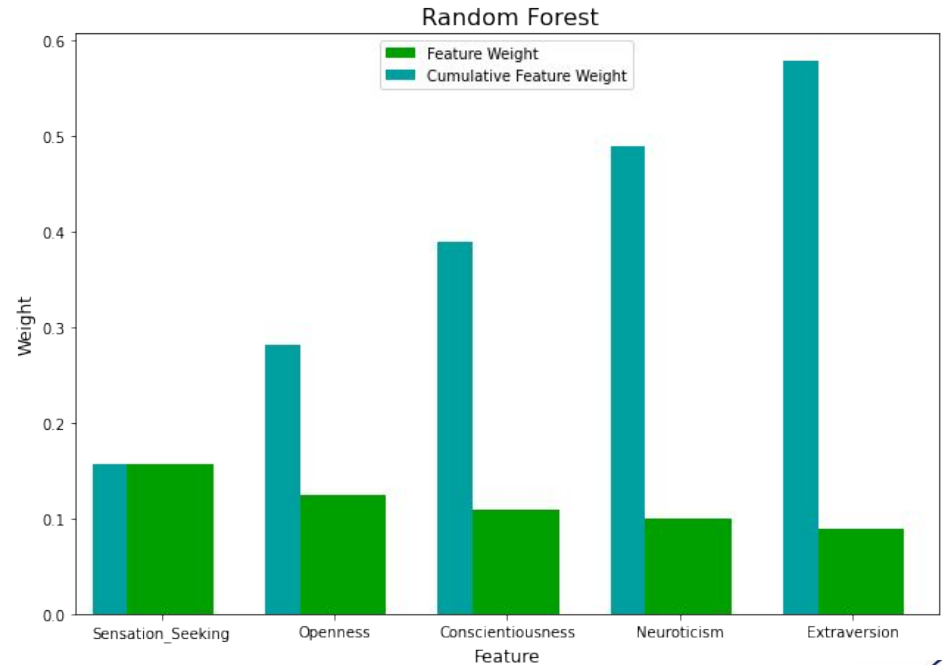


t-statistic = 13.309 p-value = 0.0000

Findings - Final model



Normalized Weights for First Five Most Predictive Features



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



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

Possible prevention 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>