# FINAL PROJECT MODULE 3

**Executive Summary** 

#### **BASIC INCOME DATASET**

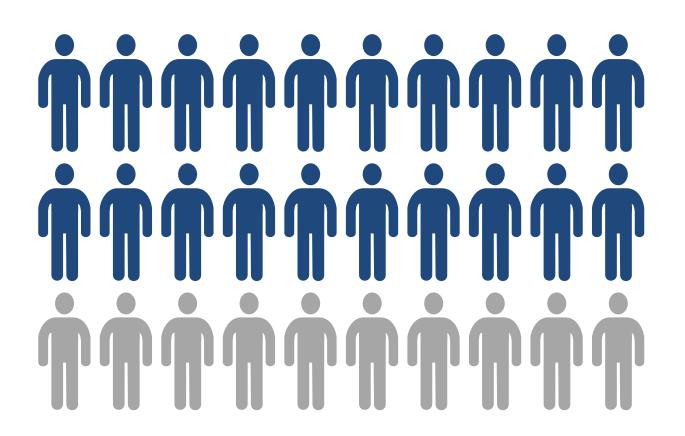


- Representative survey
- By Dalia Research
- Conducted in April 2016
- Across 28 EU member states
- 9,649 records x 15 columns
- With demographics\* and opinions\*\*
- Available on kaggle.com

<sup>\*</sup> age, gender, education, living area (city or rural), having children, having a full time job

<sup>\*\*</sup> awareness of concept, effect on work choices, convincing arguments for and against

## IF THERE WOULD BE A REFERENDUM ON INTRODUCING BASIC INCOME TODAY, HOW WOULD YOU VOTE?



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"I would vote for it" + "I would probably vote for it"

#### **CHALLENGE**

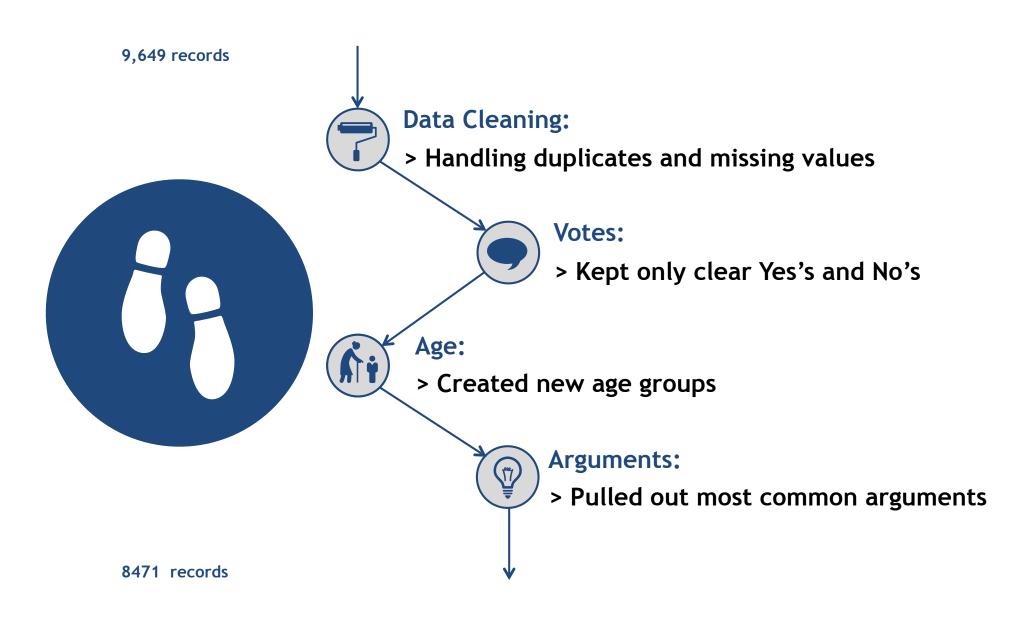
Could we possibly predict whether someone is

# for or against

the idea of a basic income?



#### STEPS OF DATA PREPARATION

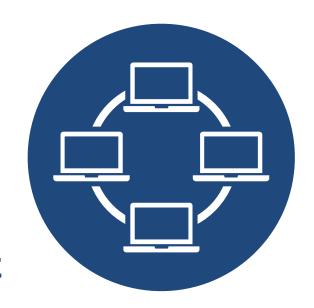


#### DIFFERENT CLASSIFICATION MODELS

>> Similar Accuracy Scores

#### **SVM**

Accuracy: 78%



## **Logistic Regression**

Accuracy: 78%

#### **Random Forest**

Accuracy: 77%

#### **XGBoost**

Accuracy: 78%

#### **NEXT: BALANCING THE DATA**

#### What was done?

The imbalance in the dataset - caused by far more yes-voters - were accounted for with a sophisticated algorithm called SMOTE.

#### What was the outcome?

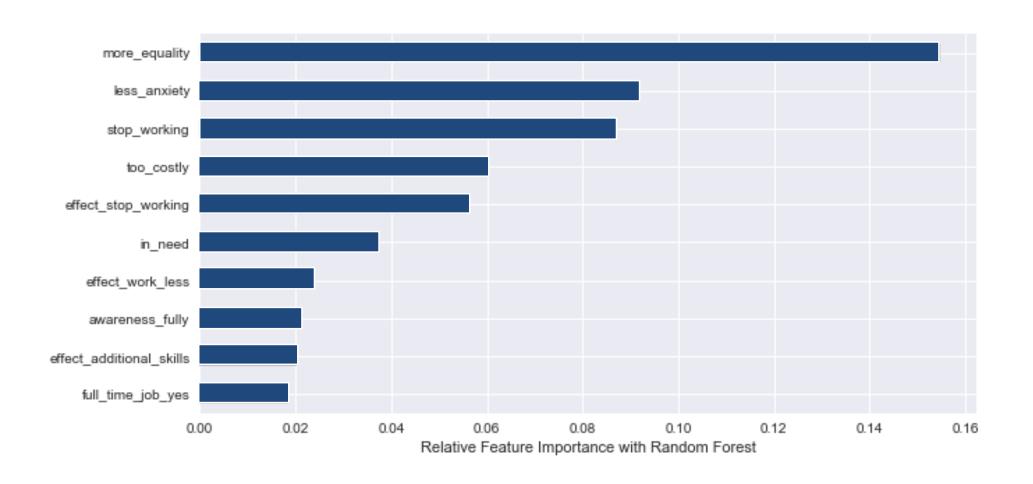
The accuracy improved by 4%. The bias disappeared.



Absolutely!



### 10 IMPORTANT FEATURES FOR PREDICTION



#### **SUMMARY**

Could we possibly predict whether someone is for or against the idea of a basic income?





Yes, we can.

With a "certainty" of almost 84%.

