

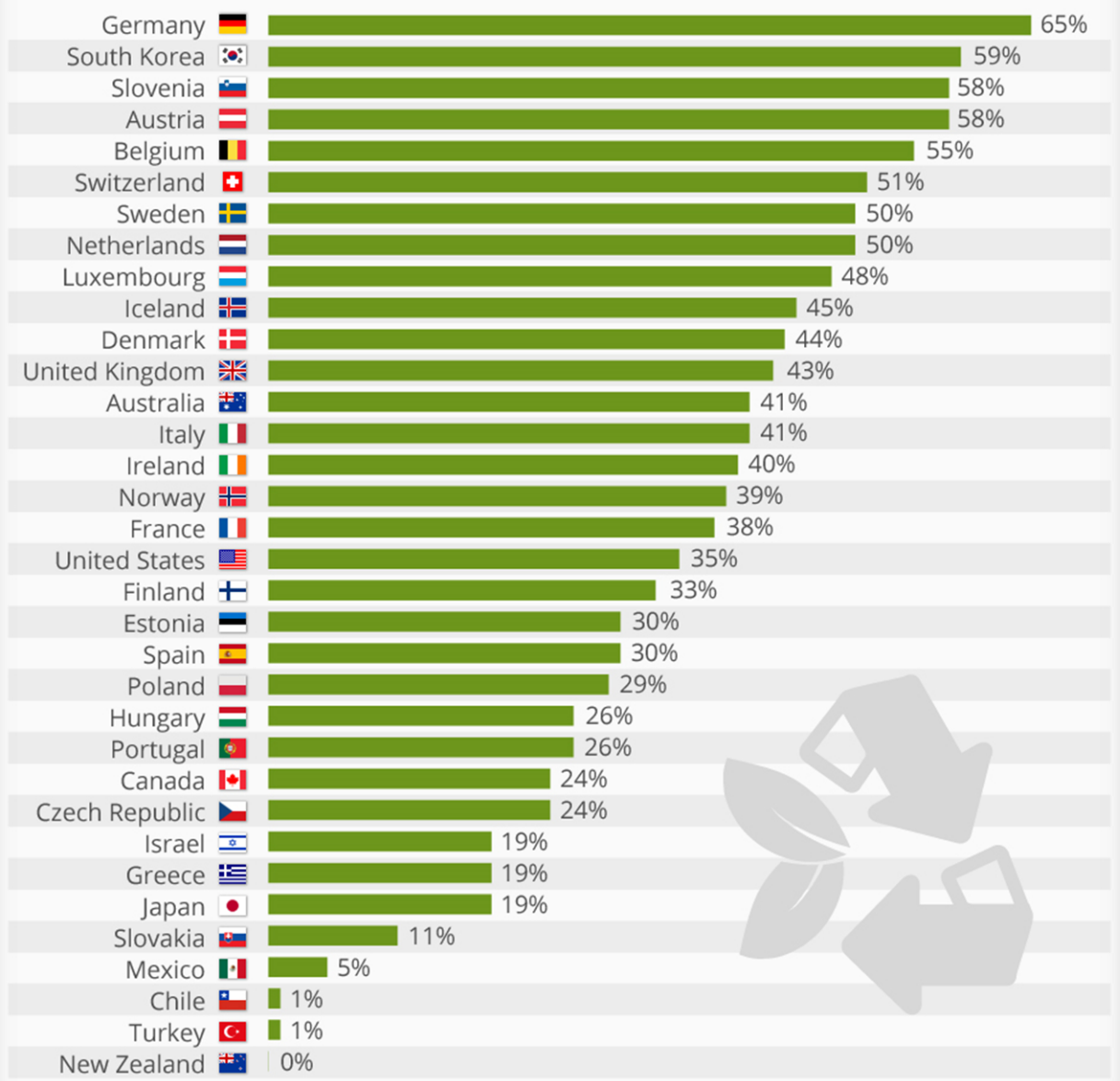


# TRASHY

<https://github.com/tedmob/Trashy/blob/master/Trashy.ipynb>

# The Countries Winning The Recycling Race

Recycled & composted waste as a share of total municipal waste in OECD countries (2013)



## PROBLEM

THE IMPORTANCE OF RECYCLING:

- 1) ENVIRONMENTAL IMPORTANCE
- 2) IMPORTANCE TO PEOPLE

9 OUT OF 10  
PEOPLE WOULD RECYCLE MORE IF IT WERE MADE  
EASIER



# OUR SOLUTION



ALLUMINIUM



PLASTIC



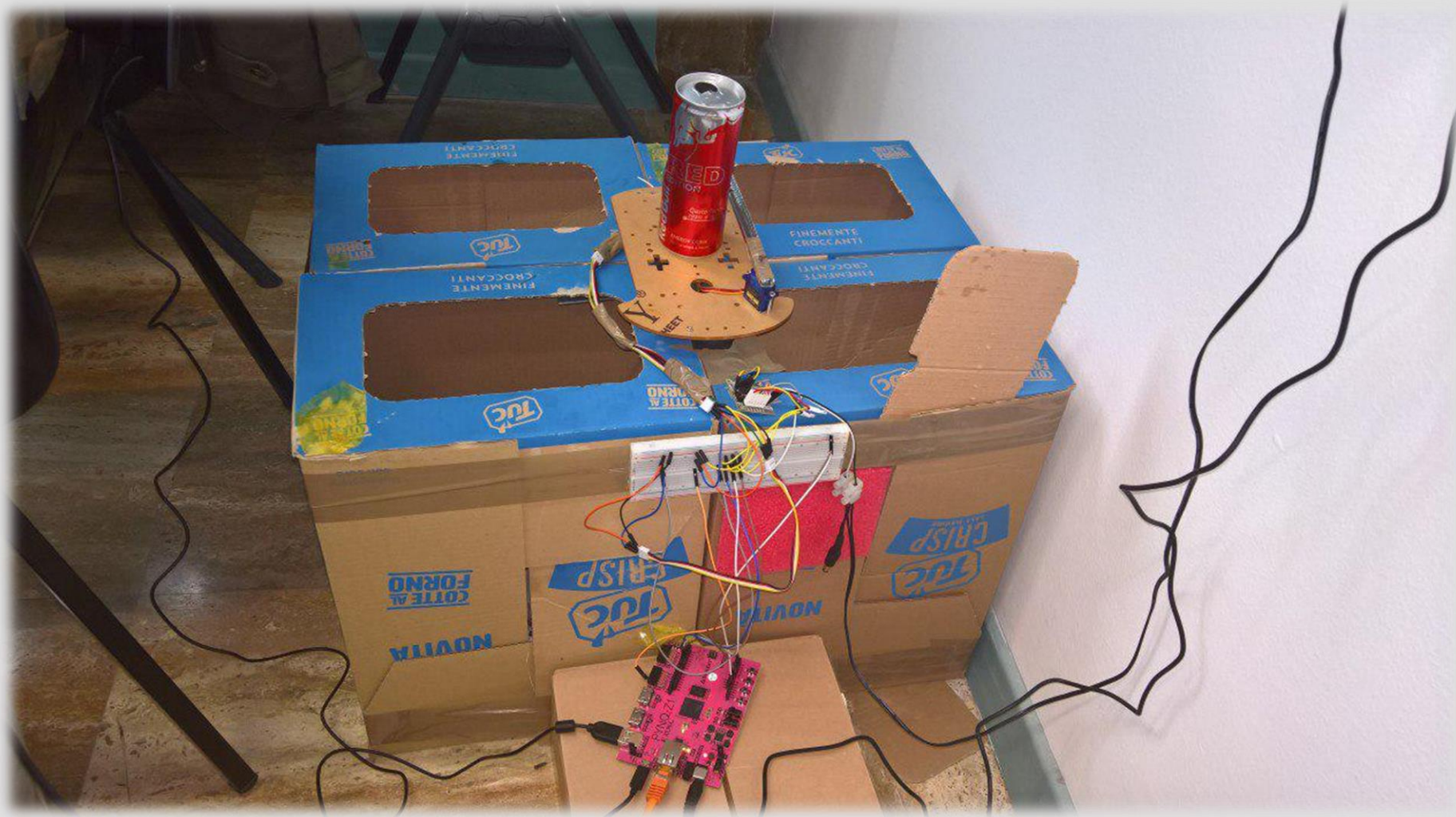
PAPER



UNDIFFERENTIATED

AUTOMATED RECYCLING SYSTEM

# OUR BABY



# WHAT WE USED

## SOFTWARE

- 1) AMAZON REKOGNITION TO RECOGNIZE OBJECTS
- 2) PYTHON CODE TO PROCESS IMAGES AND BUILD OUR DATASET
- 3) ARDUINO LIBRARIES FOR FAST PROTOTYPING

## HARDWARE

- 1) PYNQ Z1 (obviously)
- 2) ARDUINO
- 3) SERVO MOTOR, STEPPER MOTOR, WEBCAM, PROXIMITY SENSOR

# OBTAINED RESULTS



85%



65%



80%

ACCURACY

# VISION



MACHINE LEARNING ON A  
BIGGER DATASET TO  
RECOGNIZE MATERIAL WITH  
MORE ACCURACY

SECURITY INFRASTRUCTURE,  
MORE WEBCAMS AND  
OPERATE ON IMAGES TO  
ISOLATE THE OBJECT

# TEAM



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THANKS FOR THE ATTENTION