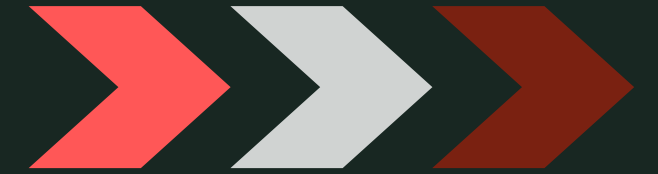


Reality Today



GLOBAL WASTE PRODUCTION

+ 70%

BY 2050

IMBALANCE

~ 25% → ~ 46%

HIGH INCOME POPULATION

WASTE PRODUCTION



© David Rengel

RECYCLE FOR OUR PLANET'S FUTURE

Starting little
Starting now

— LITTLE LITTERS

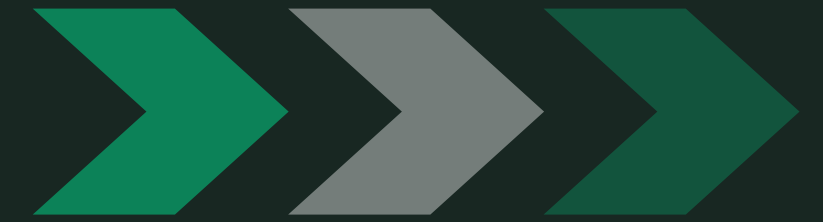


OUR AMBITION —

PROVIDE ACCURATE
WASTE SORTING TO BUILD
THE FUTURE FOR
SMART RECYCLING

Reduce waste contamination
Increase waste recycle rates

Targeted UN Goals



➤ RESPONSIBLE CONSUMPTION & PRODUCTION

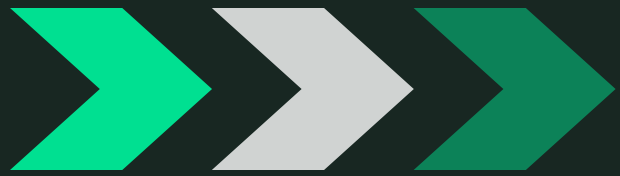
BY 2030, SUBSTANTIALLY REDUCE DECREASE THROUGH
PREVENTION, REDUCTION, **RECYCLING** AND REUSE

➤ LIFE BELOW WATER

➤ LIFE ON LAND

➤ SUSTAINABLE CITIES & COMMUNITIES

➤ CLIMATE CHANGE



OUR SOLUTION



A WEB APP

Users upload an photo

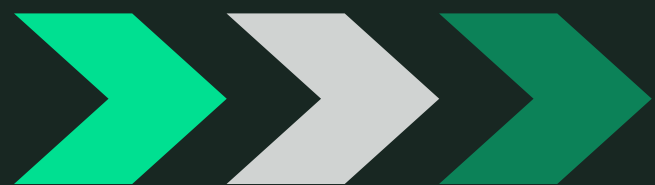
Receive the waste disposal classification

OUR LONG TERM GOAL

To build an open-source API with accurate waste classification

WASTE RECOGNITION

RECYCLE WITHOUT HASSLE



➤ TENSOR FLOW

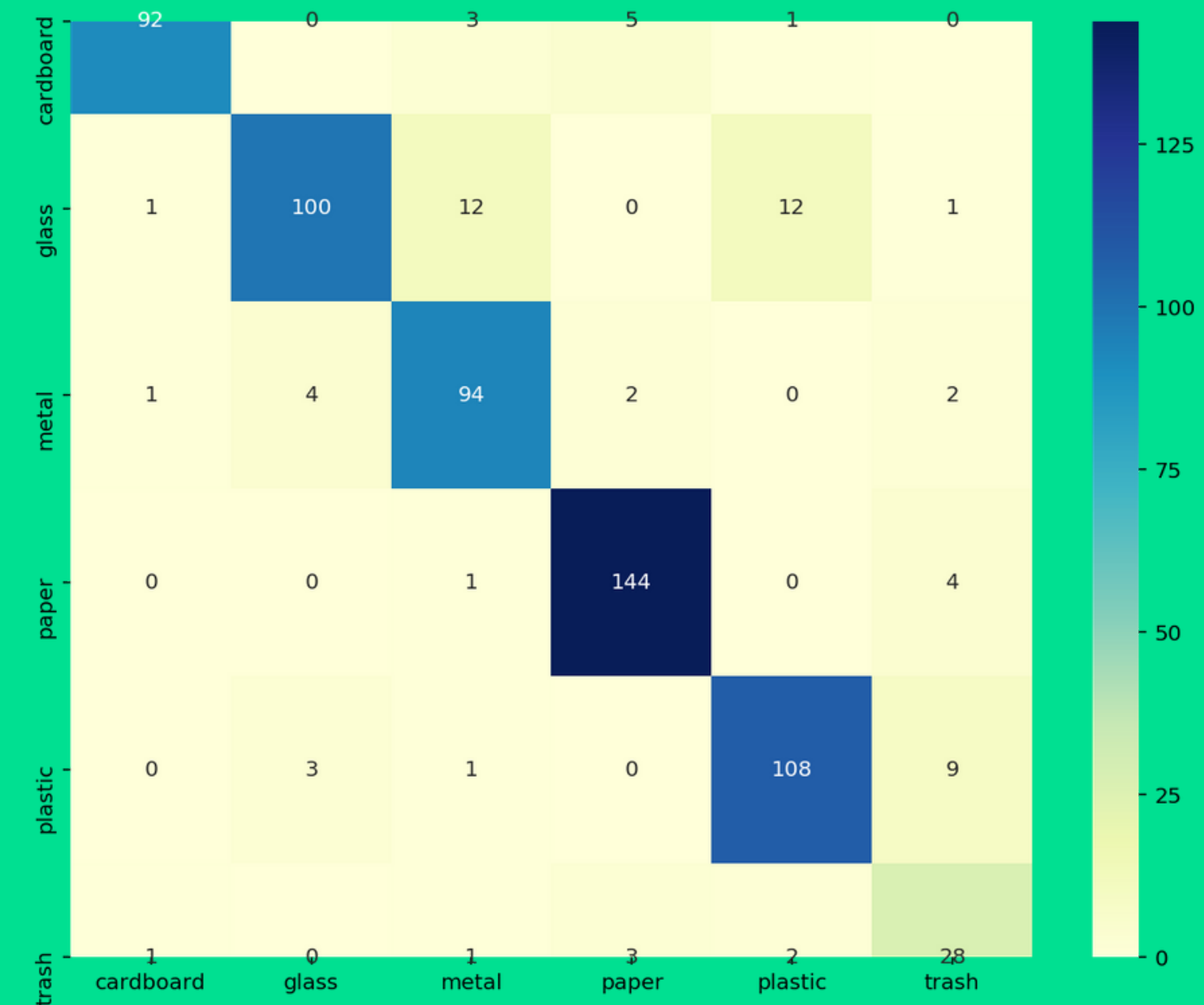
Classify waste item into 90 label categories and match to corresponding waste disposal category

➤ DEEP LEARNING RESNET34

Trained the model with 6 categories using 2000 images

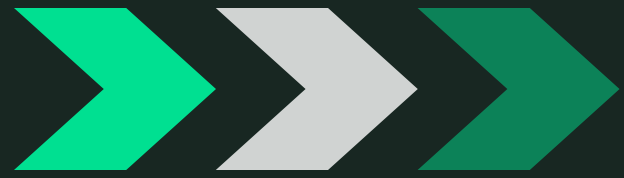
Achieved 90% validation accuracy

Directly classify into waste disposal category



TECHNOLOGY USED

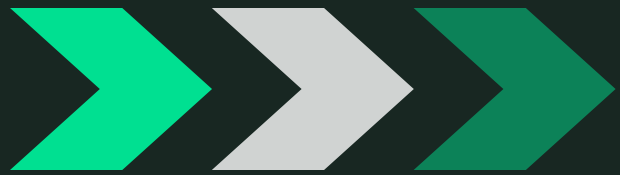




PRODUCT DEMO



**MULTI-PLATFORM
MULTI-REGION
WASTE CLASSIFICATION
VOLUNTEER INVOLVEMENT**



API DEMO



<https://littlelitter.herokuapp.com/country/>
<https://littlelitter.herokuapp.com/country/1/>
<https://littlelitter.herokuapp.com/country/0/label/apple/>
<https://littlelitter.herokuapp.com/country/1/label/apple/>



APPENDIX

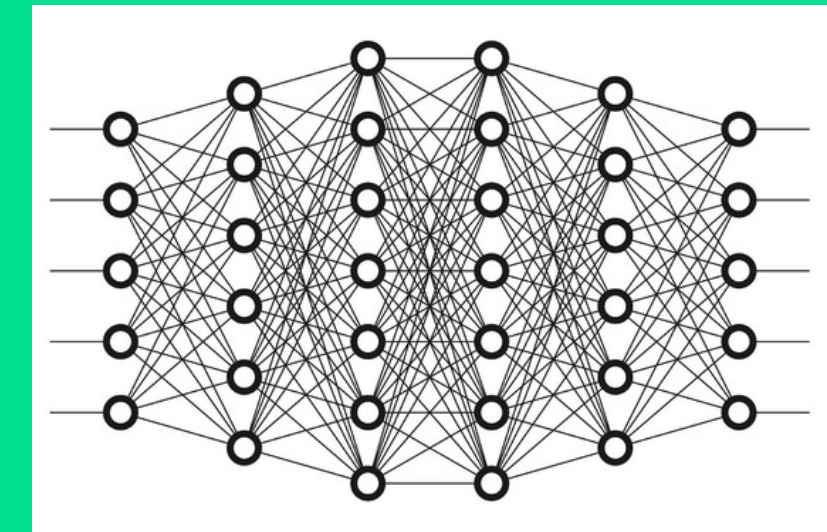
➤ USER UPLOAD
IMAGE



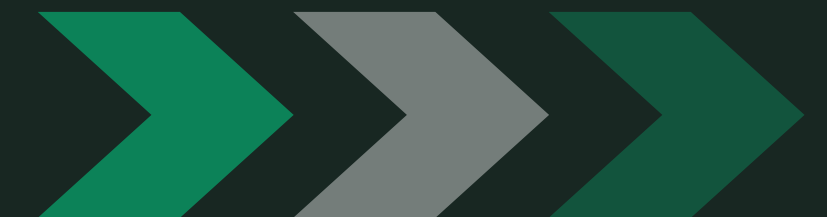
➤ CATEGORIZE
LABEL



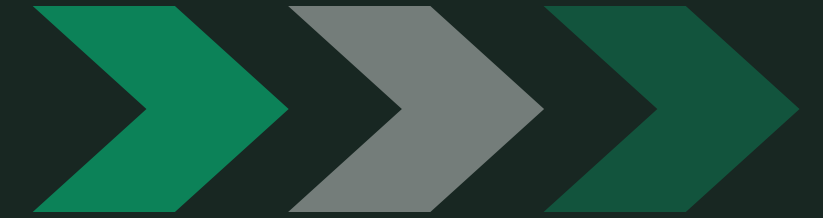
➤ ELSE,
USE RESNET



PROCEDURE FLOW



Future



WORLDWIDE REGION SUPPORT

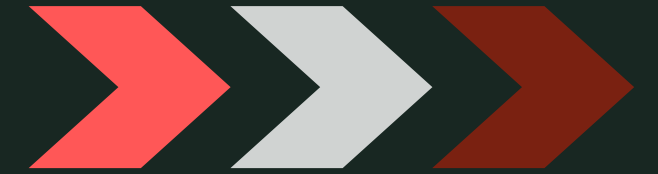
Targeting high waste producing
countries first

99% RECOGNITION ACCURACY

EXTENSIBLE

Integrate with other hardware
systems to build automatic
waste sorting facilities

Why Now?



Past importers of recyclable waste

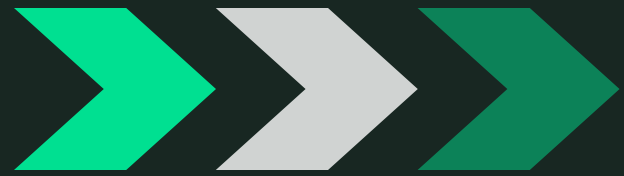
Says NO

CHINA, MALAYSIA

US: biggest exporter of plastic waste

80% Single-stream recycling

**Need to
Recycle
Smarter**



POTENTIAL PARTNERSHIP

Corporations

World Bank

**Environmental
Groups**