

SHARE
REPORT
SELL

AM1 USA (2019)

Condition: New | Ticker: AM1-USA19 | 100% Authentic

Size

All ▾

Last Sale \$2,300 ▲+\$300 (15%)

Size: 10.5 | View All Sales

\$2,499

Lowest Ask

Buy
or Bid

\$2,000

Highest Bid

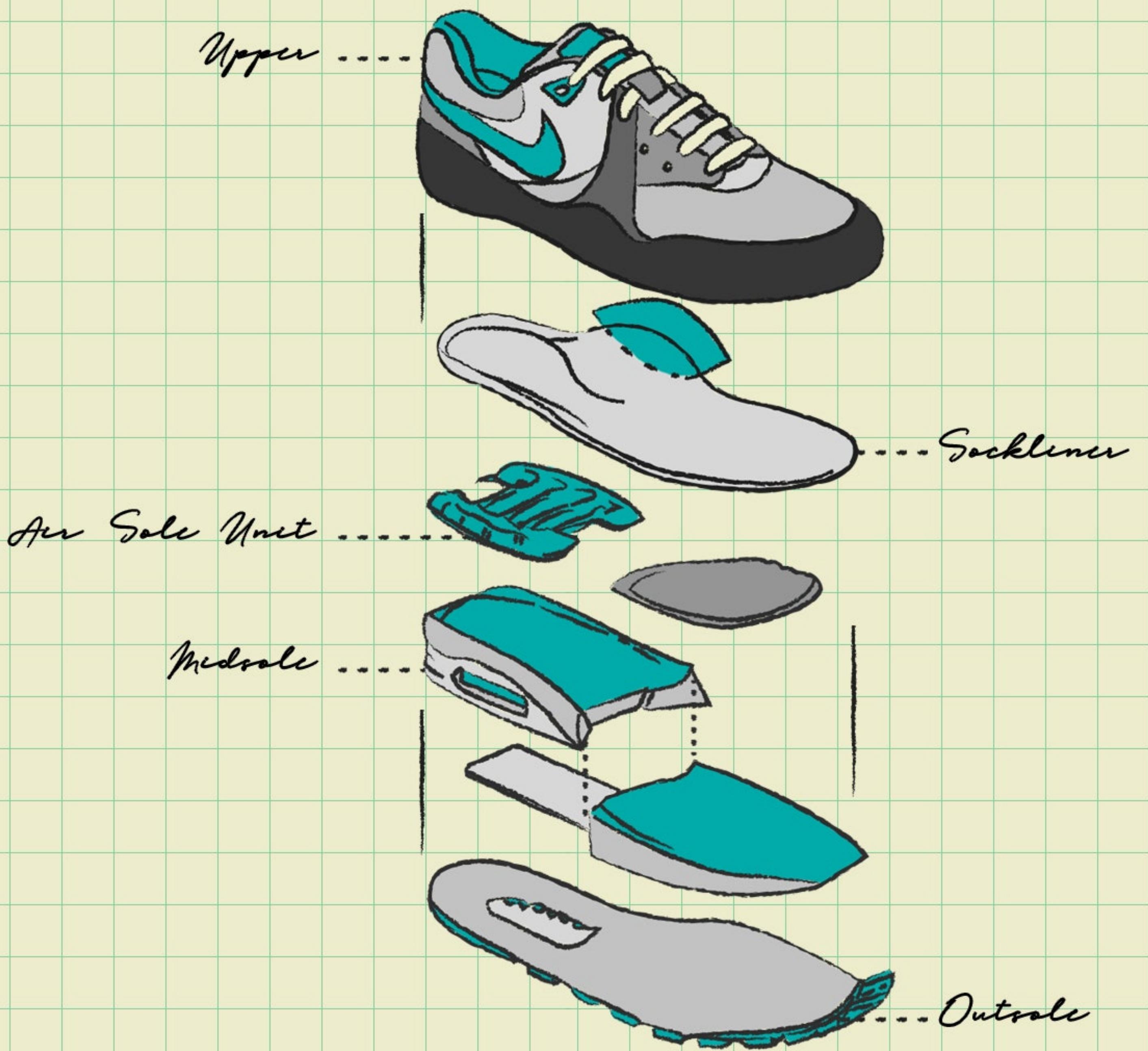
Sell
or Ask

Size: 10.5 | View All Asks

Size: 10.5 | View All Bids

COUNTERFEIT SNEAKERS CLASSIFICATION

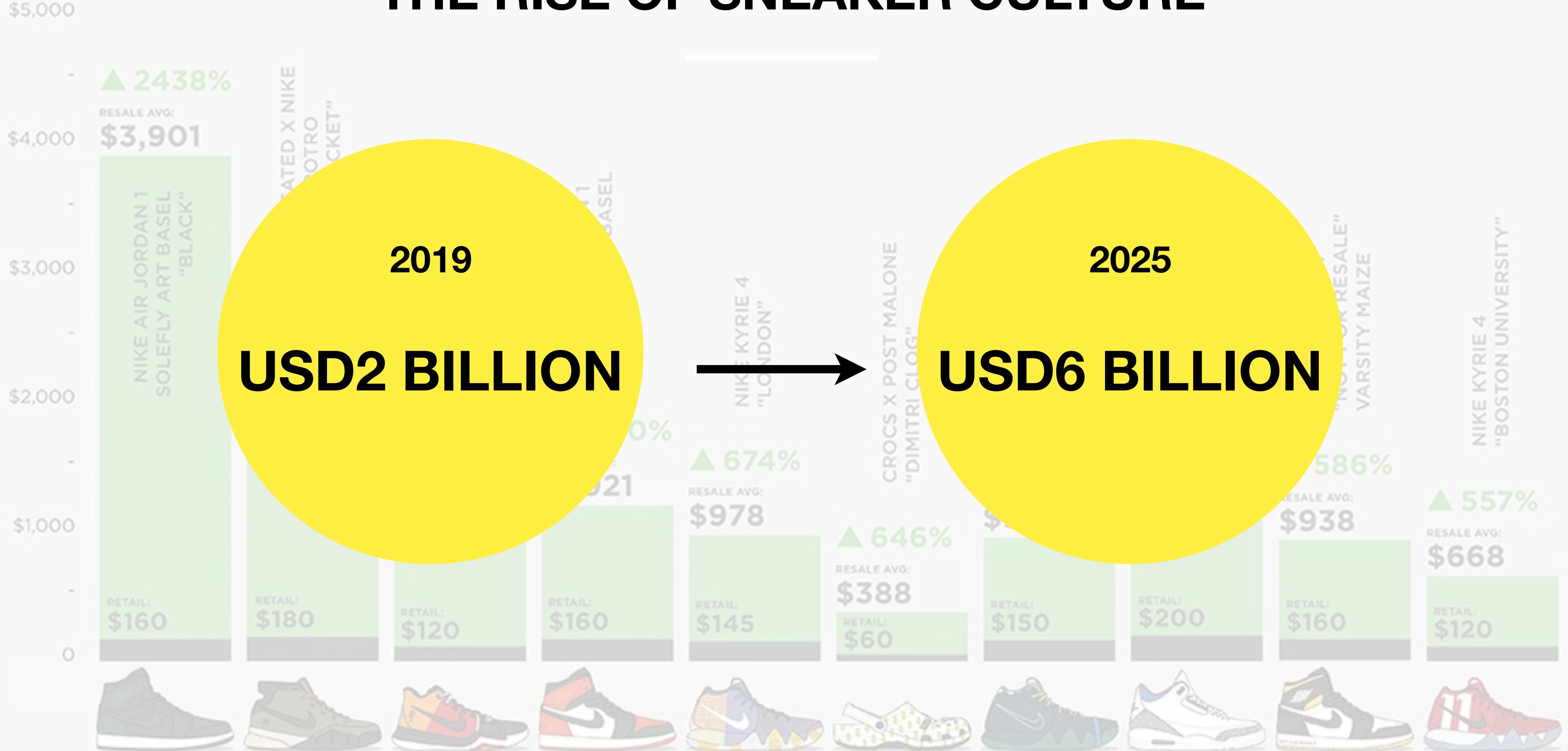


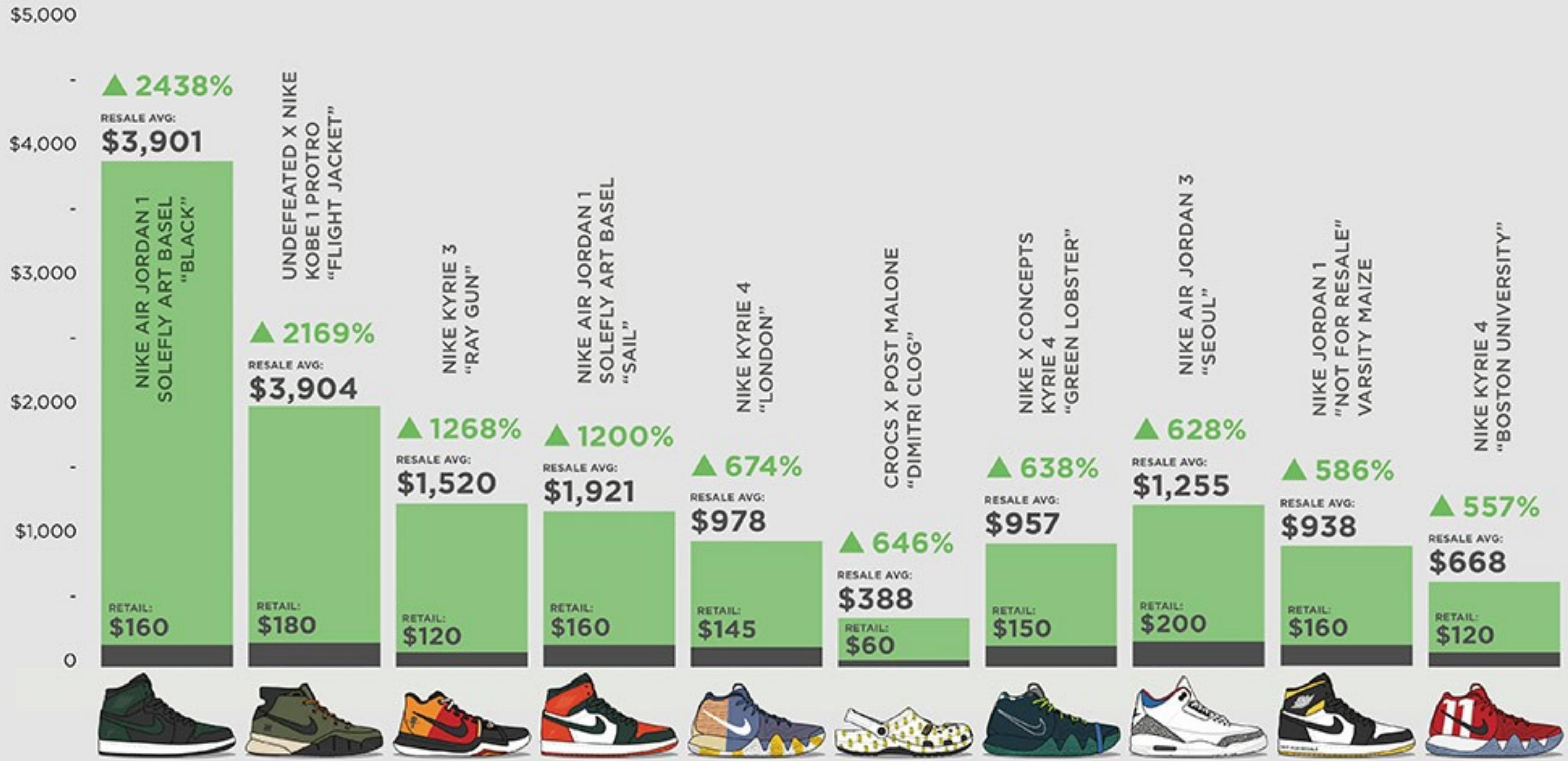




55 BILLION USD

THE RISE OF SNEAKER CULTURE







STYLE

SIGN IN/UP

Opinion

Daniel Langer

Dior x Nike Air Jordan 1 sneakers, loved by Kylie Jenner and re-selling for US\$20,000 already, are the world's smartest investment – thanks to millennial FOMO

Selling for upwards of US\$20,000 on resale sites like stockx.com, after 5 million bidders signed up for just 8,500 pairs on sale, the landmark limited edition Christian Dior and Nike sneaker collaboration cynically exploits fear of missing out – FOMO – a lesson for all luxury brands seeking to market to millennials and Gen Z

 Daniel Langer
Published: 2:28pm, 21 Jul, 2020

Why you can trust SCMP



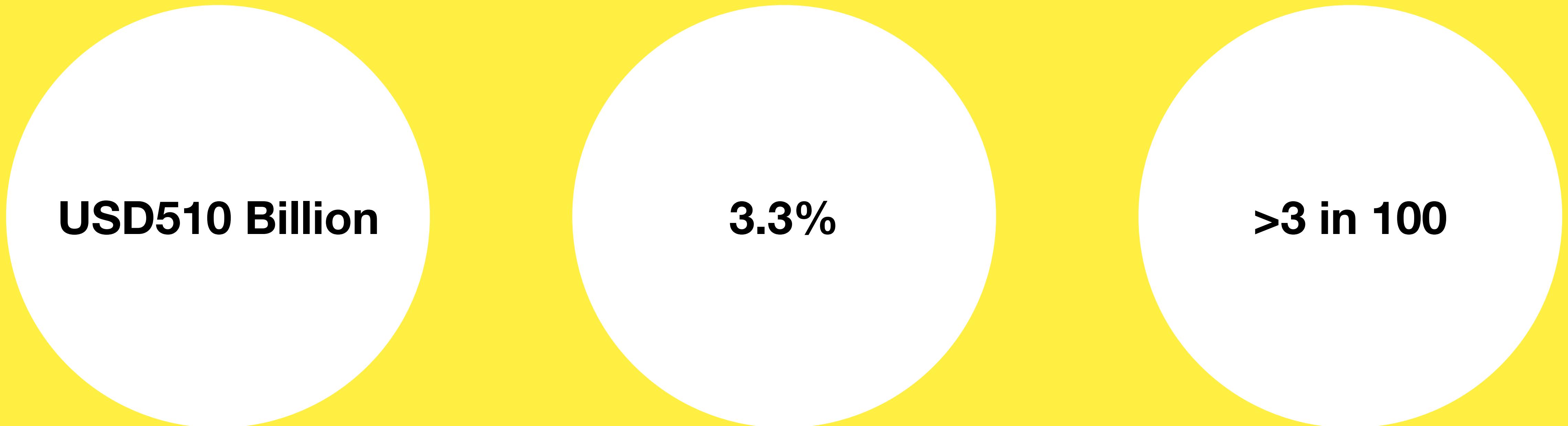
South China Morning Post



Counterfeit Culture

07УМ 777
RUS

WITH MONEY COMES COUNTERFEIT



USD510 Billion

The amount that the global counterfeit sneakers market is valued at in 2018

3.3%

Percentage of global trade that counterfeit sneakers contribute to

>3 in 100

The average number of sneakers shipped globally that are found to be fake

So, what are the costs of replica sneakers?

COSTS OF REPLICA SNEAKERS

BRANDS



Reputation damage



Undercut sales

COUNTRY



Funds criminal organisations



POOL

PROBLEM STATEMENT

- 01** Build a classification model with CNN to differentiate between authentic and replica sneakers
- 02** Audience: Serve as a tool to the brands and public
- 03** Success Metric: ROCAUC Score

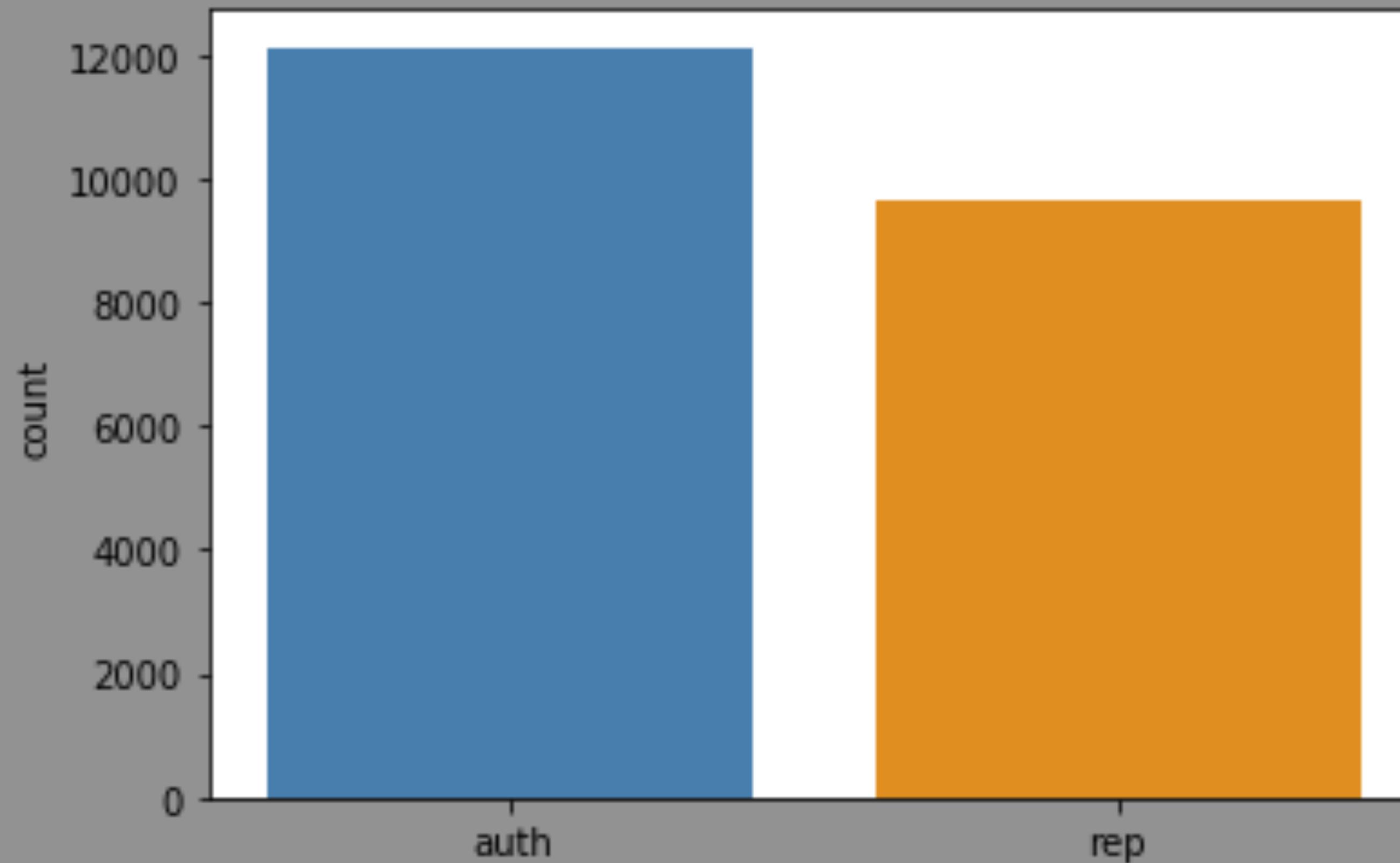
WEB SCRAPING

REDDIT & IMGUR



imgur

Reddit & imgur APIs



20,000 images

53/47 split

DATA EXPLORATION



Size Tags

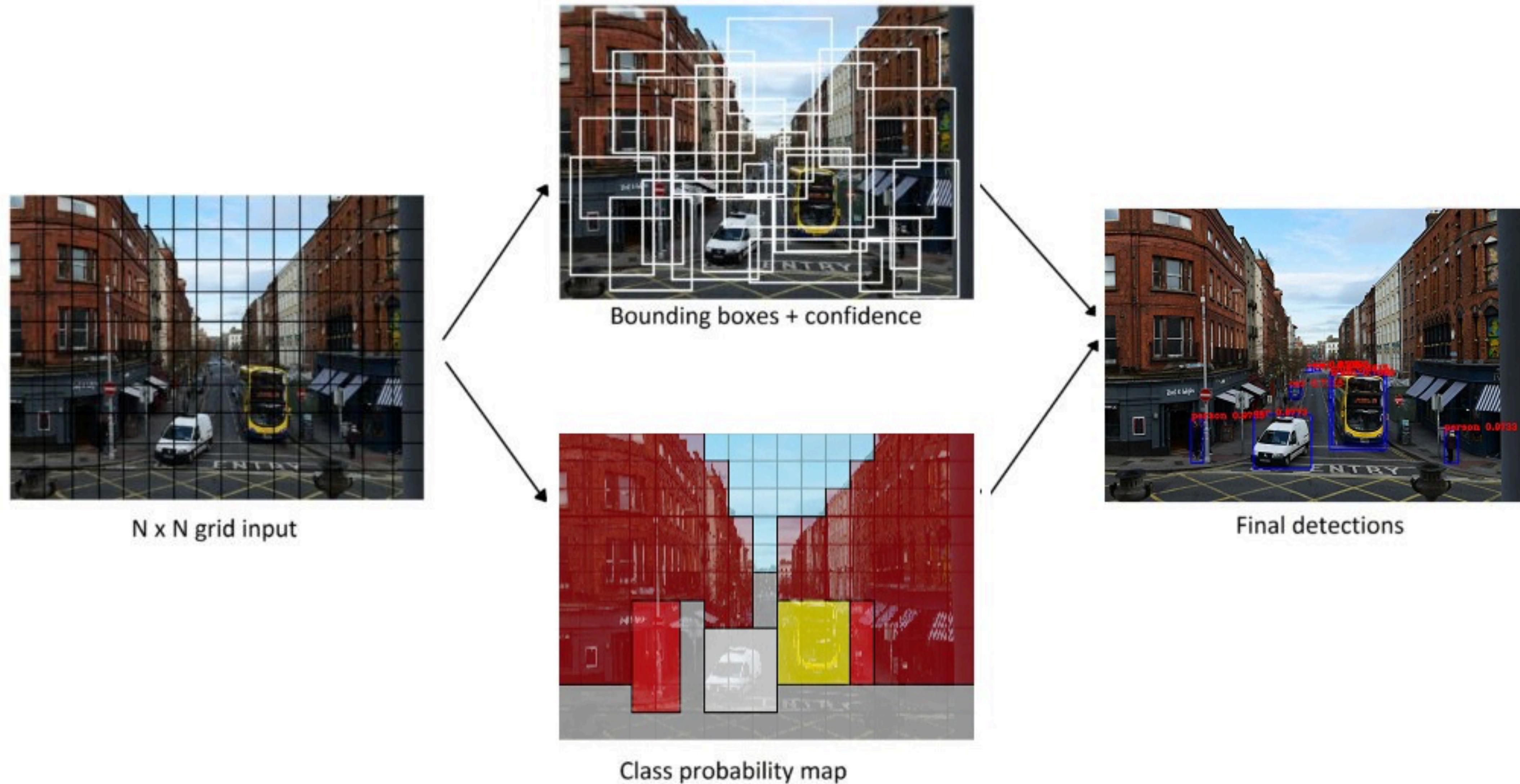


Clothing



“Fit Pics”

YOLOV3



DATA CLEANING

01



Using YOLOv3 Object
Detection

02



Crop with bounding boxes
to give clearer and
centred images

IMAGE PREPROCESSING

IMAGE PREPROCESSING: DETAILS TO NOTE

01

Details in sneaker authentication process is important

- Size of logos
- Shade of colour of sneakers
- Shape/Silhouette

02

Steps to maintain the integrity of data

- Convert to RGB
- Resize while maintaining aspect ratio
- Pad images to ensure consistent sizes fed into machine

03

Remaining steps ensure that the machine can read

- Convert to jumpy array with shape (150,150,3)
- Convert to float
- Scale by dividing by 255





REAL



FAKE

IMAGE PREPROCESSING: _____

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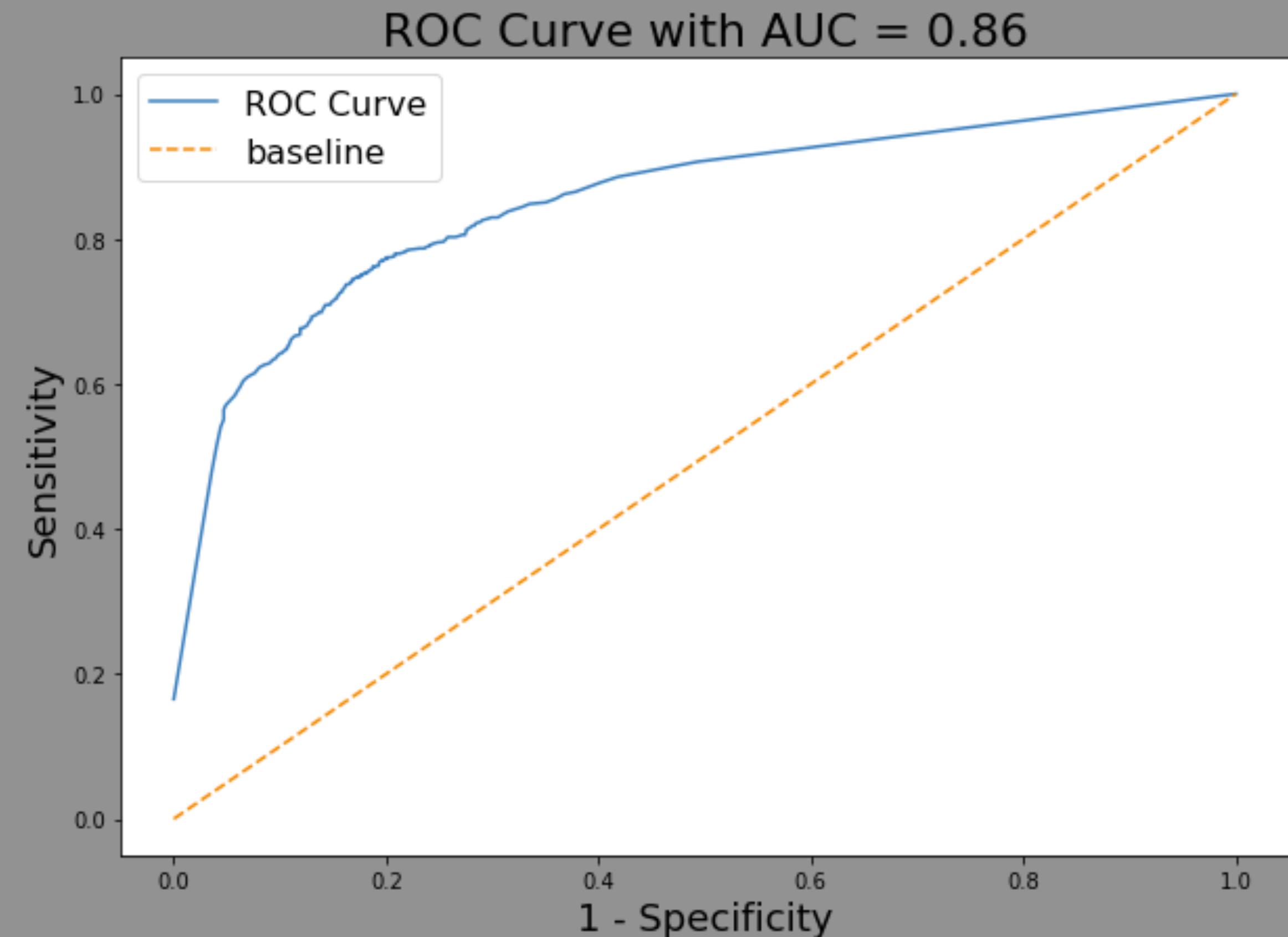
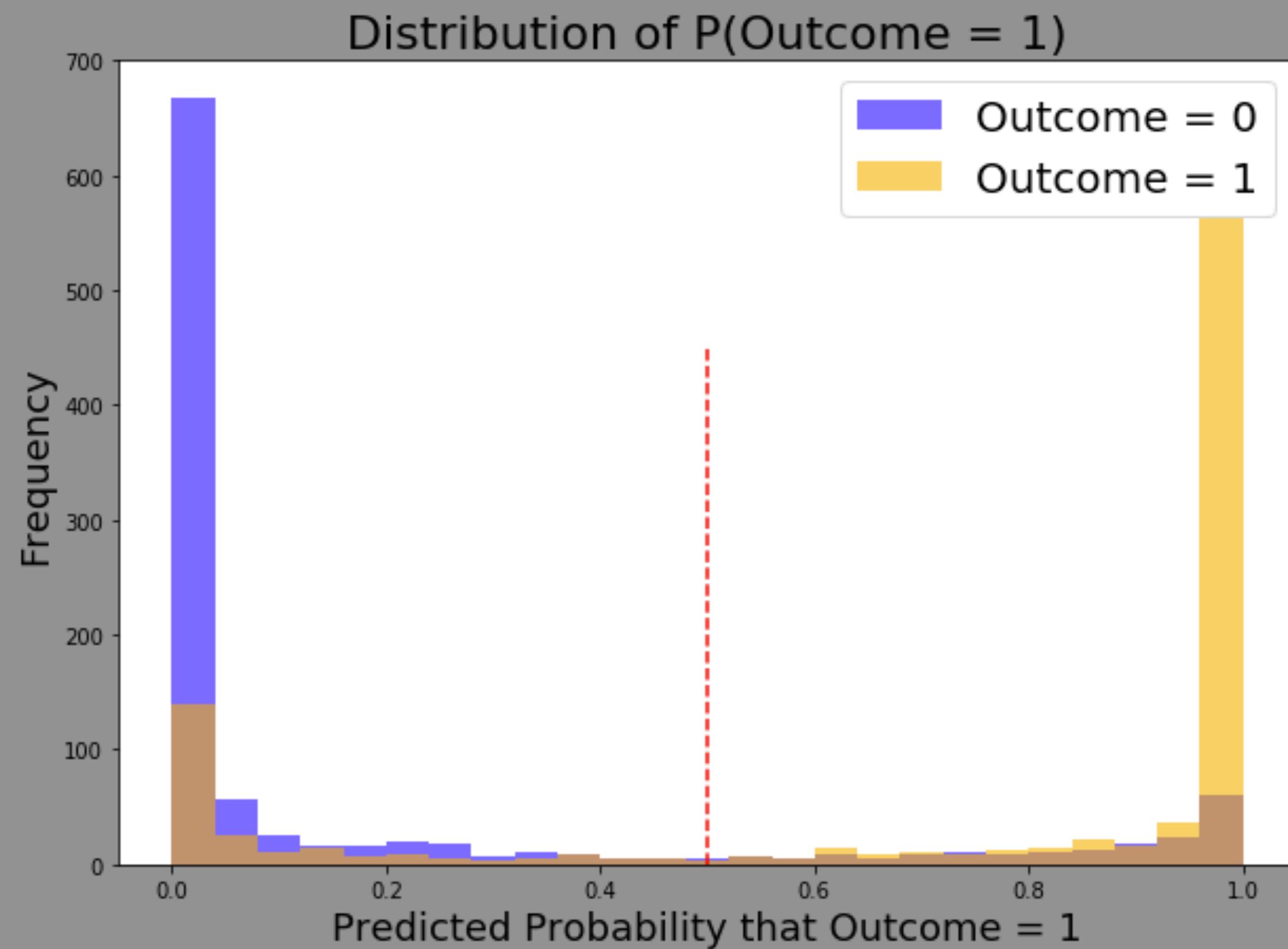
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CNN Model

BASELINE SCORE

- 01** Average of labels: 0.47
- Predict all images as authentic and 47% of the images would be correctly predicted
 - This is our score to beat
 - Otherwise, It would be kind of pointless

ROCAUC SCORE: 0.86

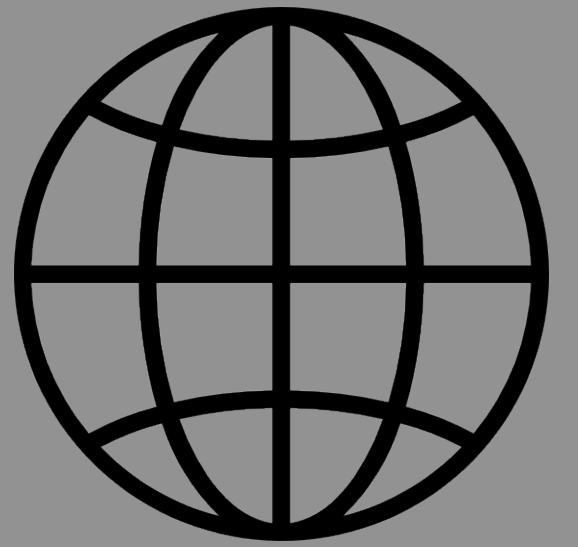


CONCLUSIONS

01 Satisfactory Results

- Good first step into world of image classification
- Tool to get second opinion before purchasing in secondary market

NEXT STEPS



Web Deployment

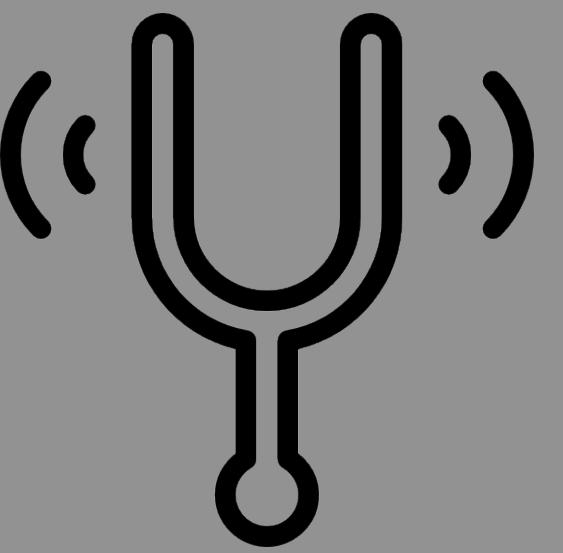


Image Segmentation
Batch Processing



Limitations: Shoe
boxes, size tags and
smell

WHEN YOU KNOW SHIT'S REAL



The More You Know



Questions?