PILLS CLASSIFICATION

GROUP 5

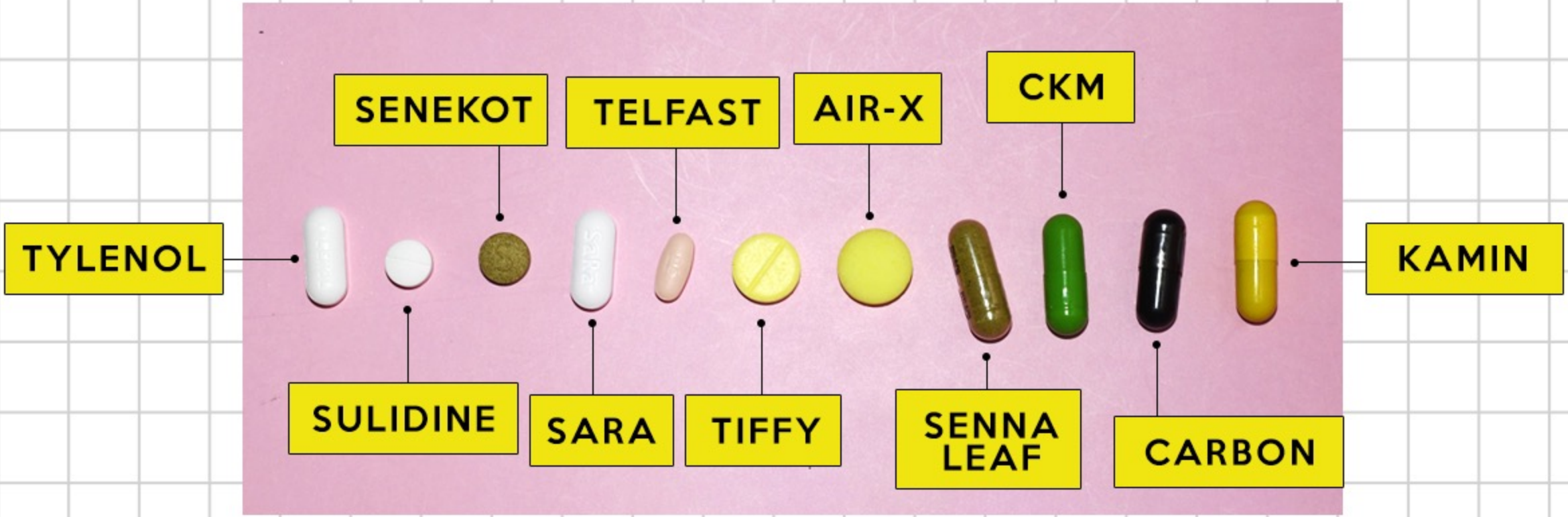
MEDICAL RESEARCH

MEMBER

62011087	ANANCHANA LERTPHITAKSUNTORN
62011178	NATTARRUD CHAROENNITHI
62011182	PANADDA LUCKANANUKUL

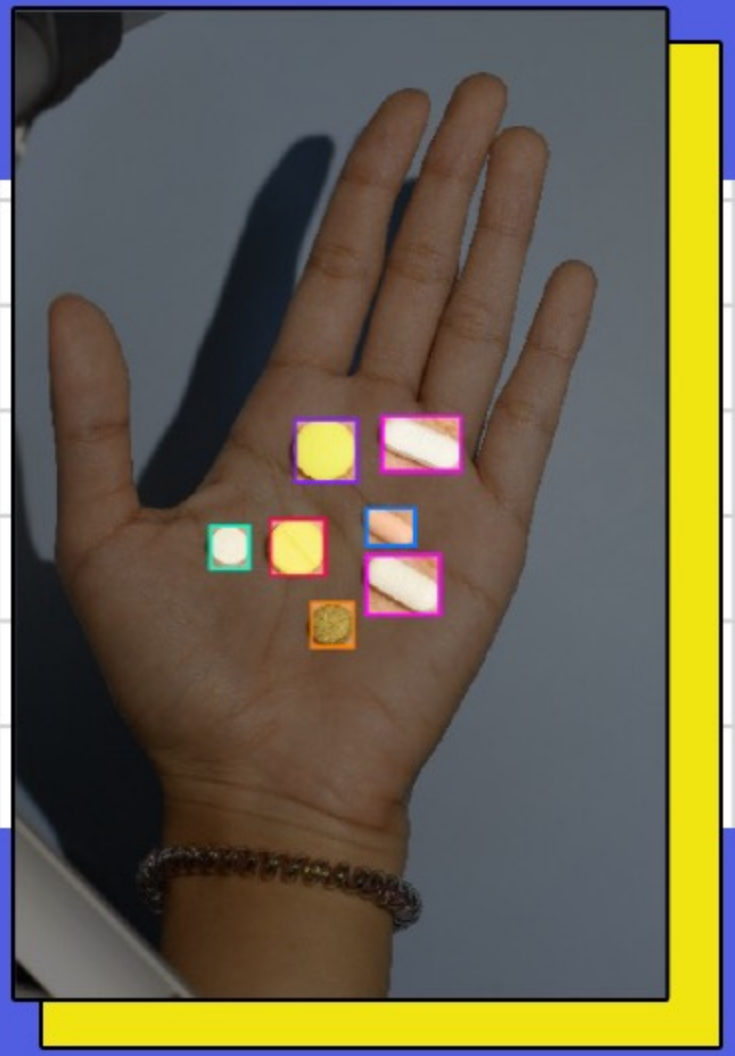
OBJECTIVES

HELP PEOPLE IDENTIFY DRUG'S TYPE AND EFFECT WITHOUT SEEKING PHARMACIST


TYLENOL
SULIDINE
SENEKOT
SARA
TELFAST
TIFFY
AIR-X
SENNA LEAF
CKM
CARBON
KAMIN

GATHER DATA *

LABELED DATA



Annotations

Group: drugs

airx	1
paracetamol	2
senokot	1
sulidine	1
telfast	1
tiffy	1

AI TECNI-QUES

- YOLOv5s MODEL
- USE CUSTOM DATASET WITH PRETRAINED WEIGHTS
- TRAIN VALIDATE TEST METHOD
- USE GOOGLE COLAB TO TRAIN OUR MODEL

TRAINING VALIDATION TESTING SETS

TOTAL IMAGE = 616 IMAGES

TRAINING SET
540 IMAGES (88 %)

VALIDATION SET
51 IMAGES (8 %)

TESTING SET
25 IMAGE (4 %)

TRAINING PARAMETER

IMG SIZE	416
BATCH SIZE	16
EPOCHS	300
MODEL	yolov5s

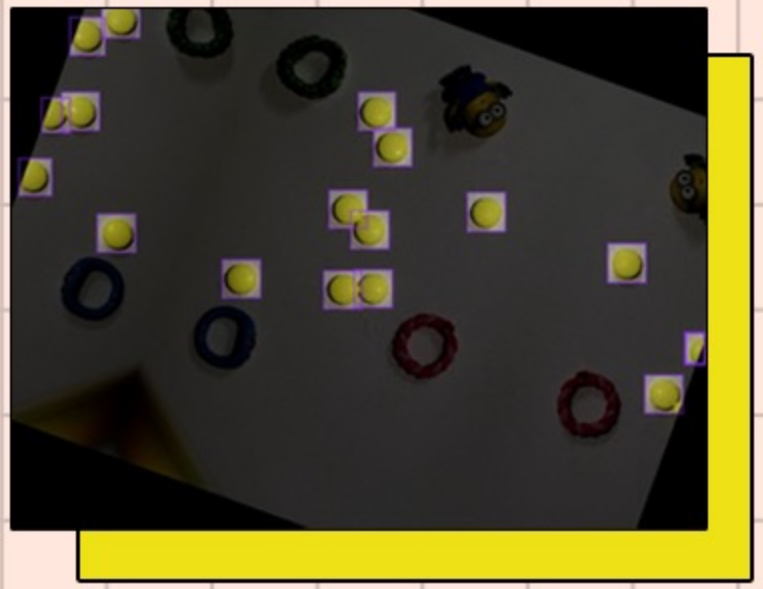
PRE-PROCESSING

RESIZE	REDUCED TO 640 X 480

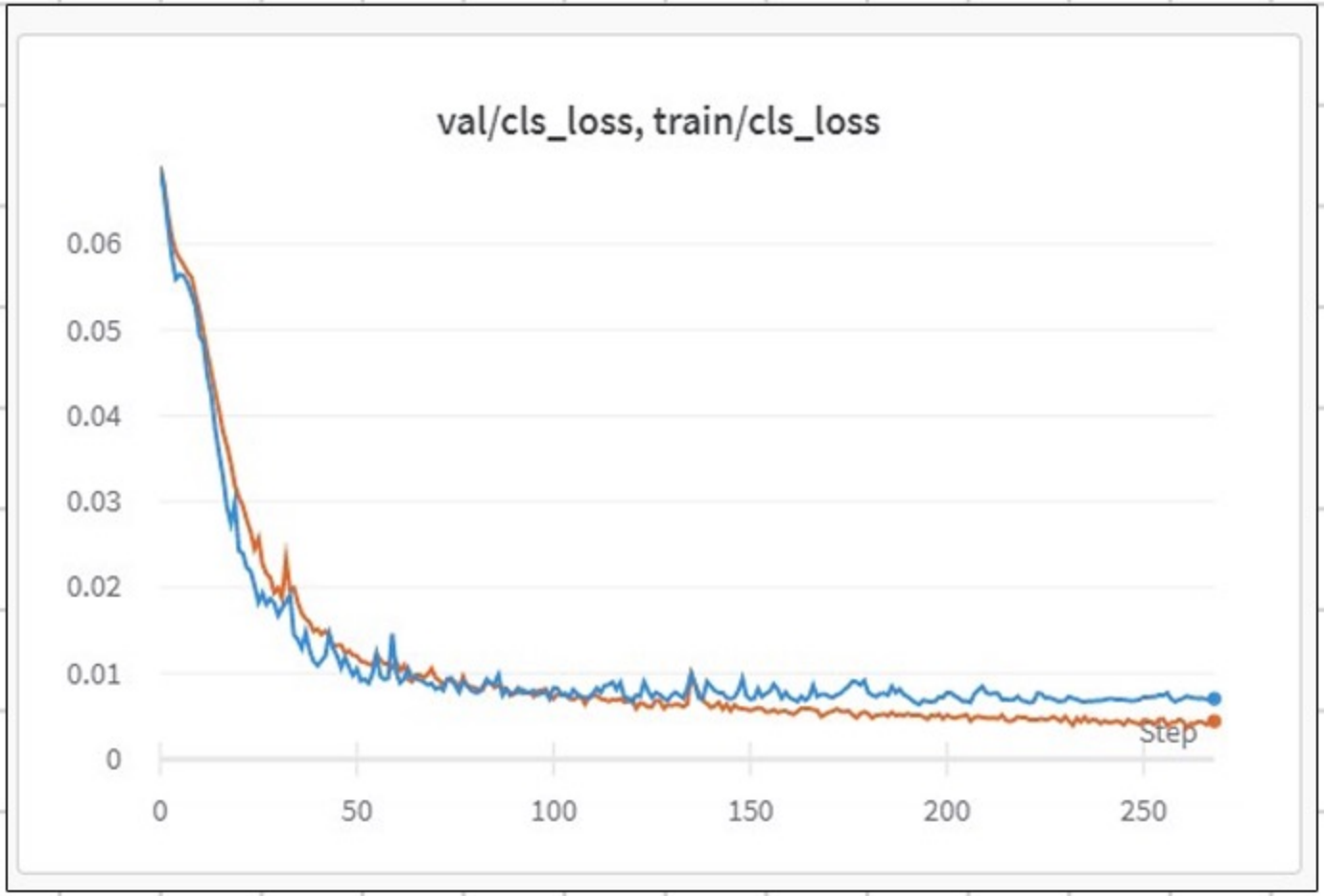
AUGMENTATIONS

ROTATION	BETWEEN -45 AND +45
BRIGHTNESS	BETWEEN -20% AND +20%
EXPOSURE	BETWEEN -25% AND +25%

TRAINNING DATA

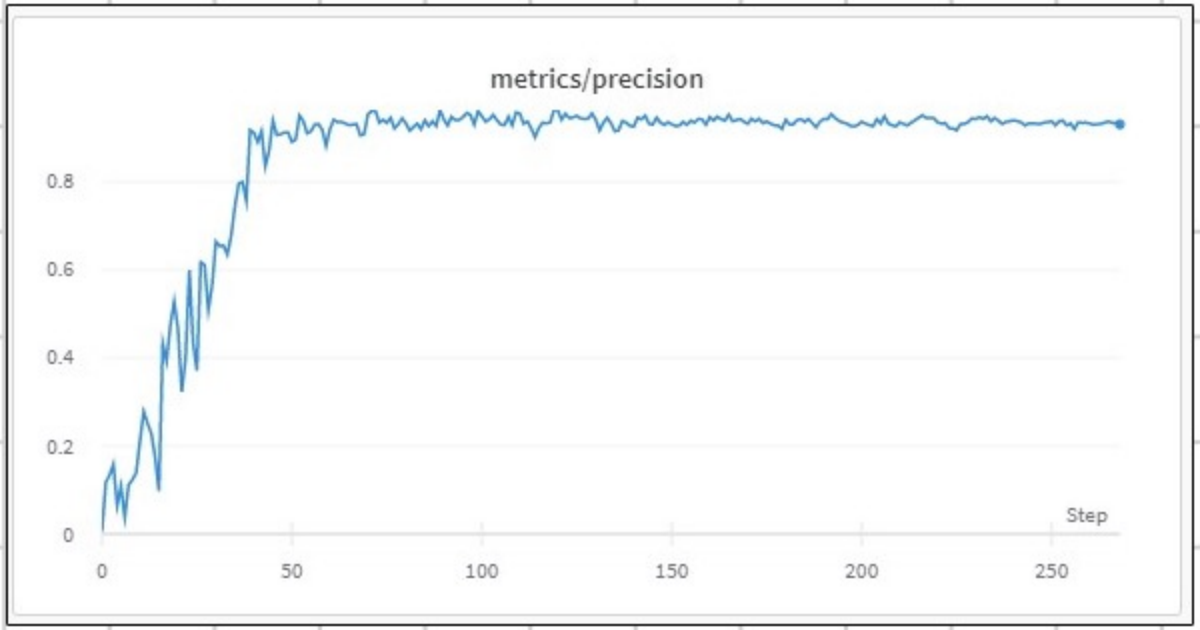


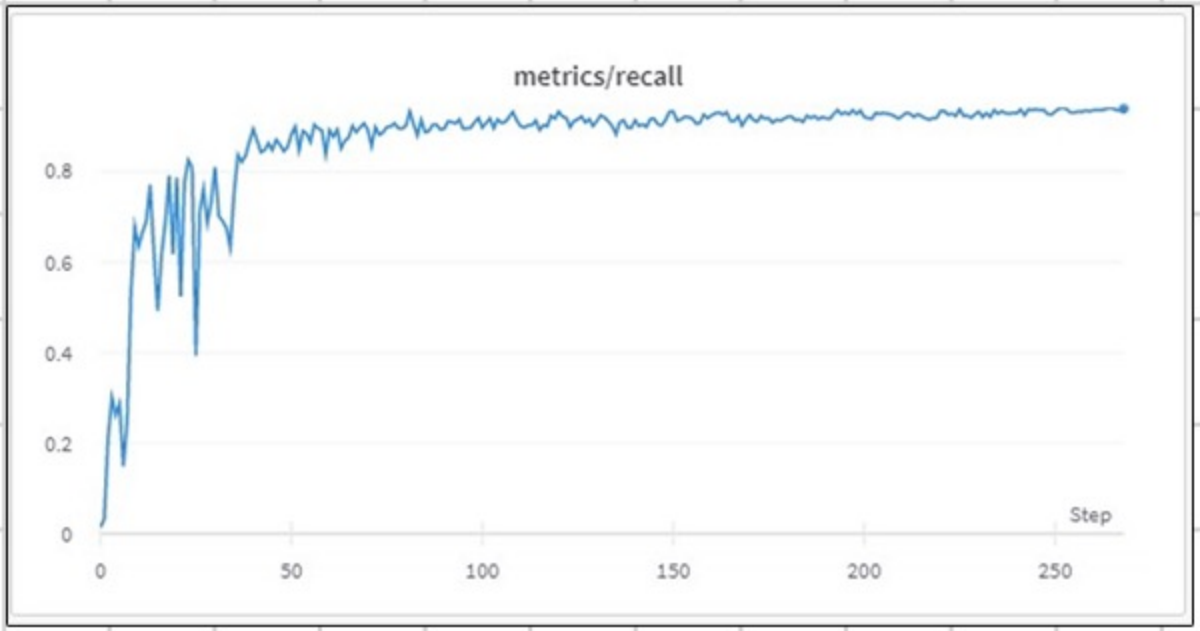
LOSS GRAPH



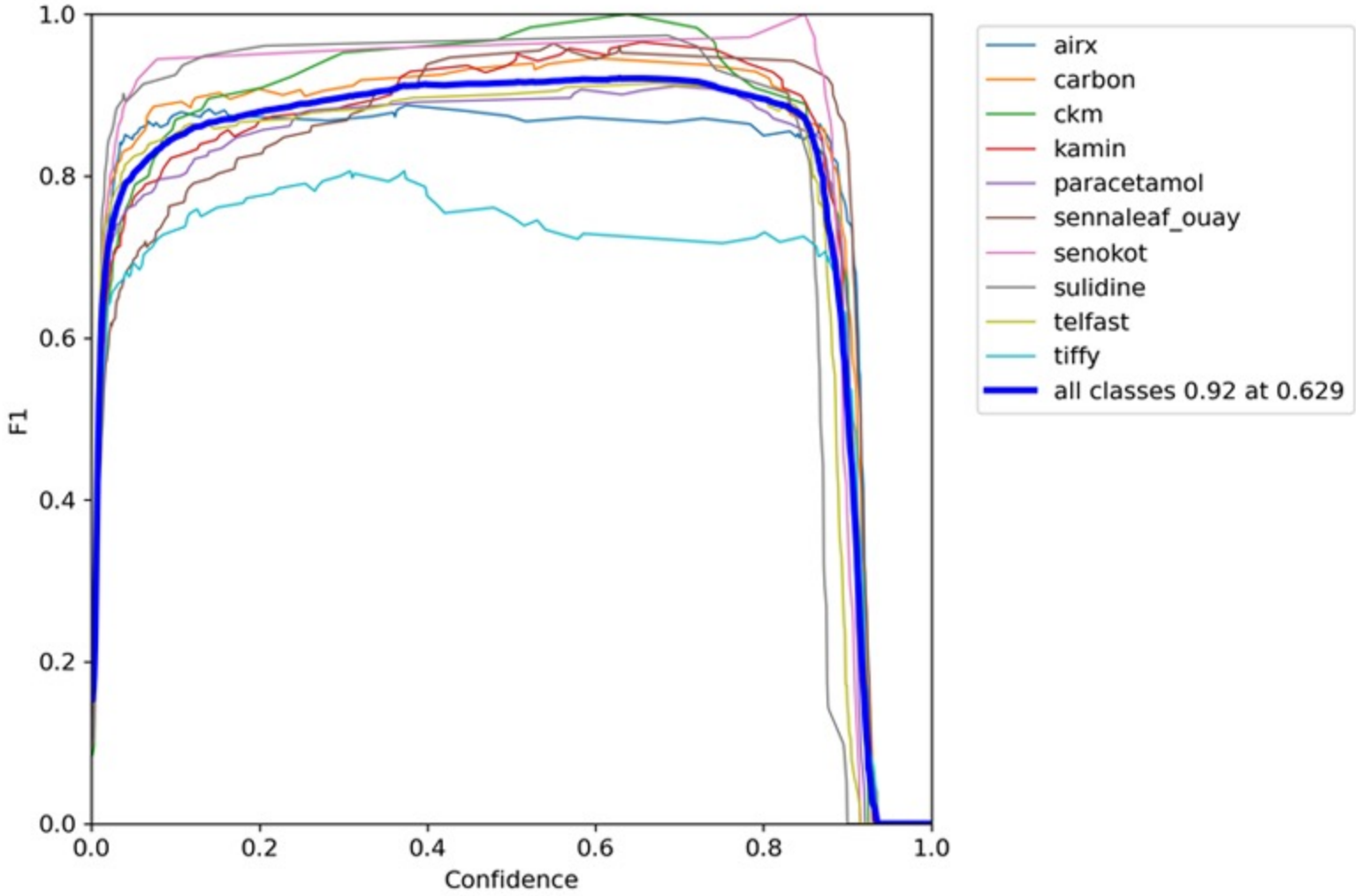
VAL TRAINING

PRECISION / RECALL

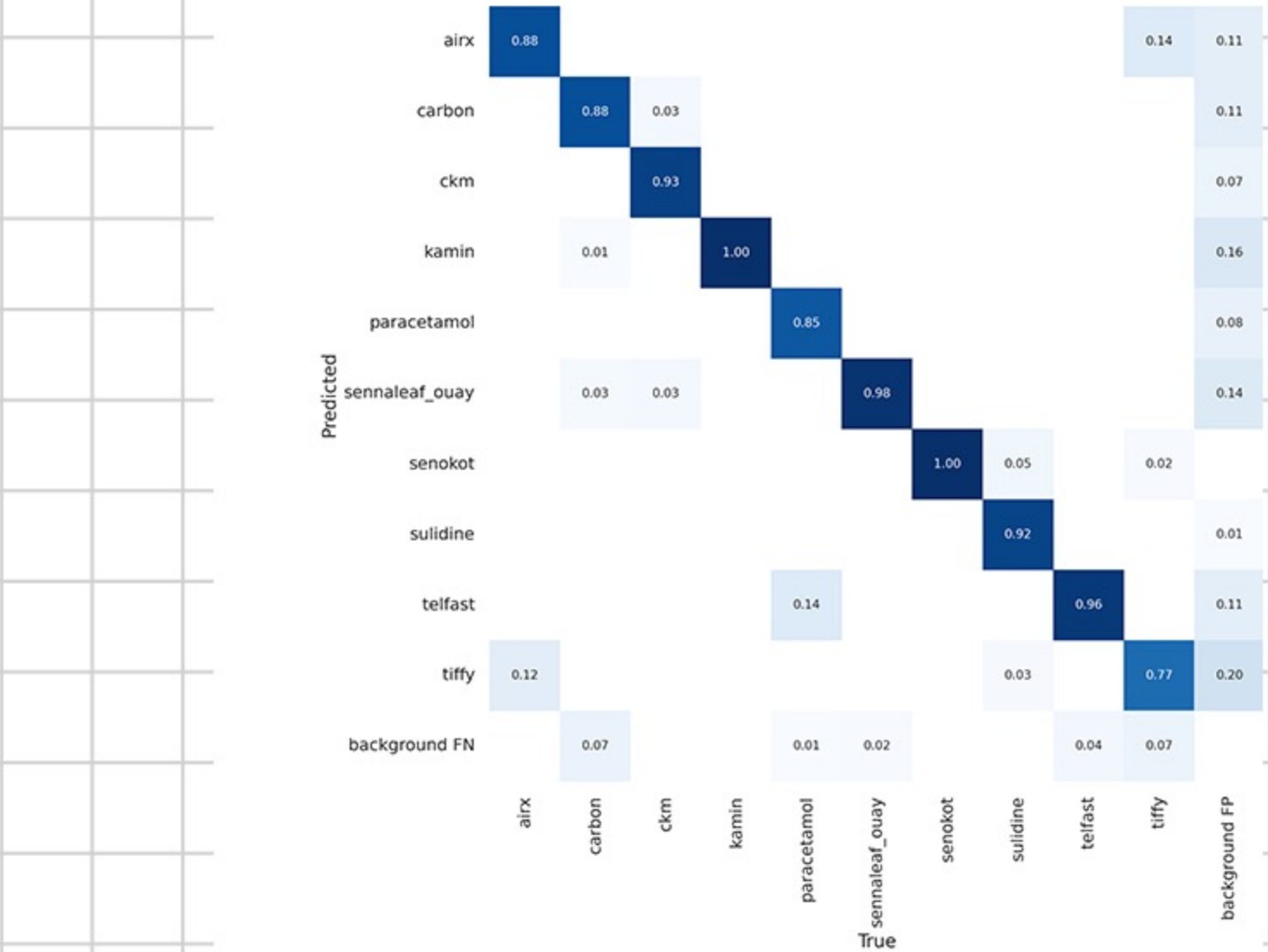




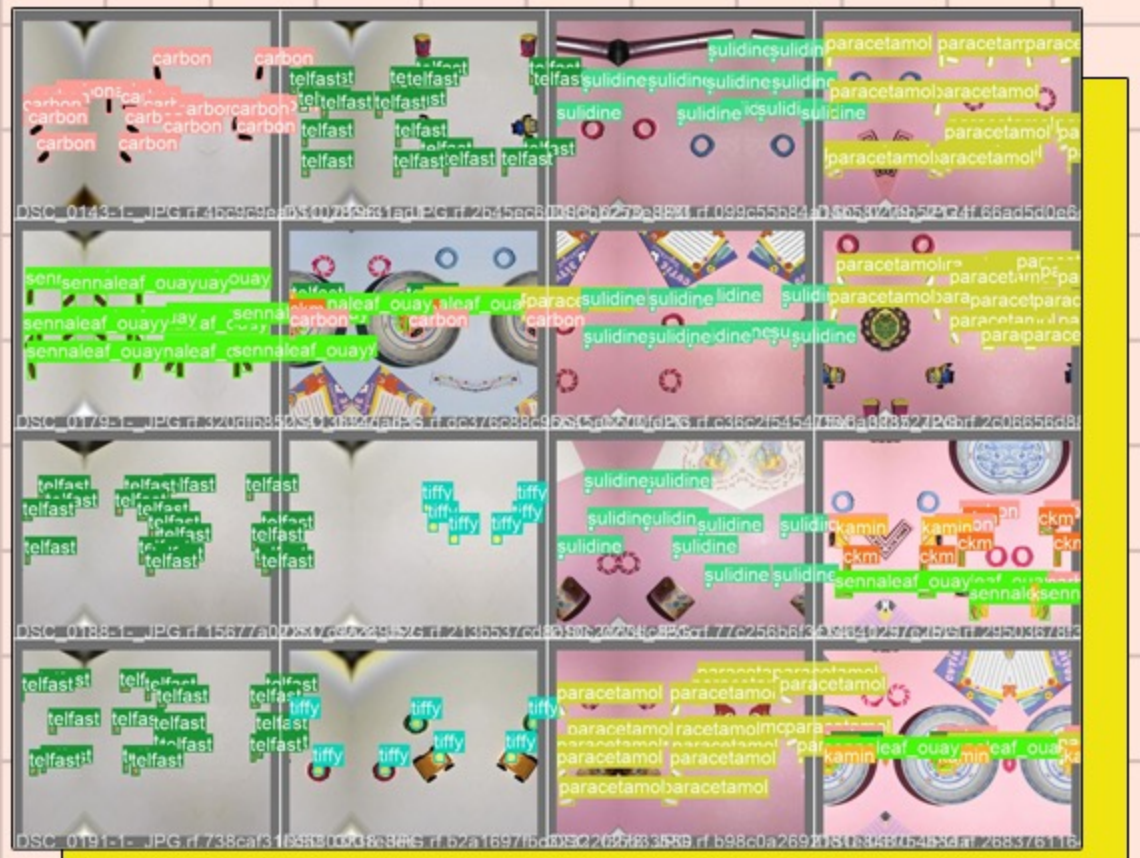
F1 SCORE


1.0
0.8
0.6
0.4
0.2
0.0
F1
0.0
0.2
0.4
0.6
0.8
1.0
Confidence
airx
carbon
ckm
kamin
paracetamol
sennaleaf_ouay
senokot
sulidine
telfast
tiffy
all classes 0.92 at 0.629

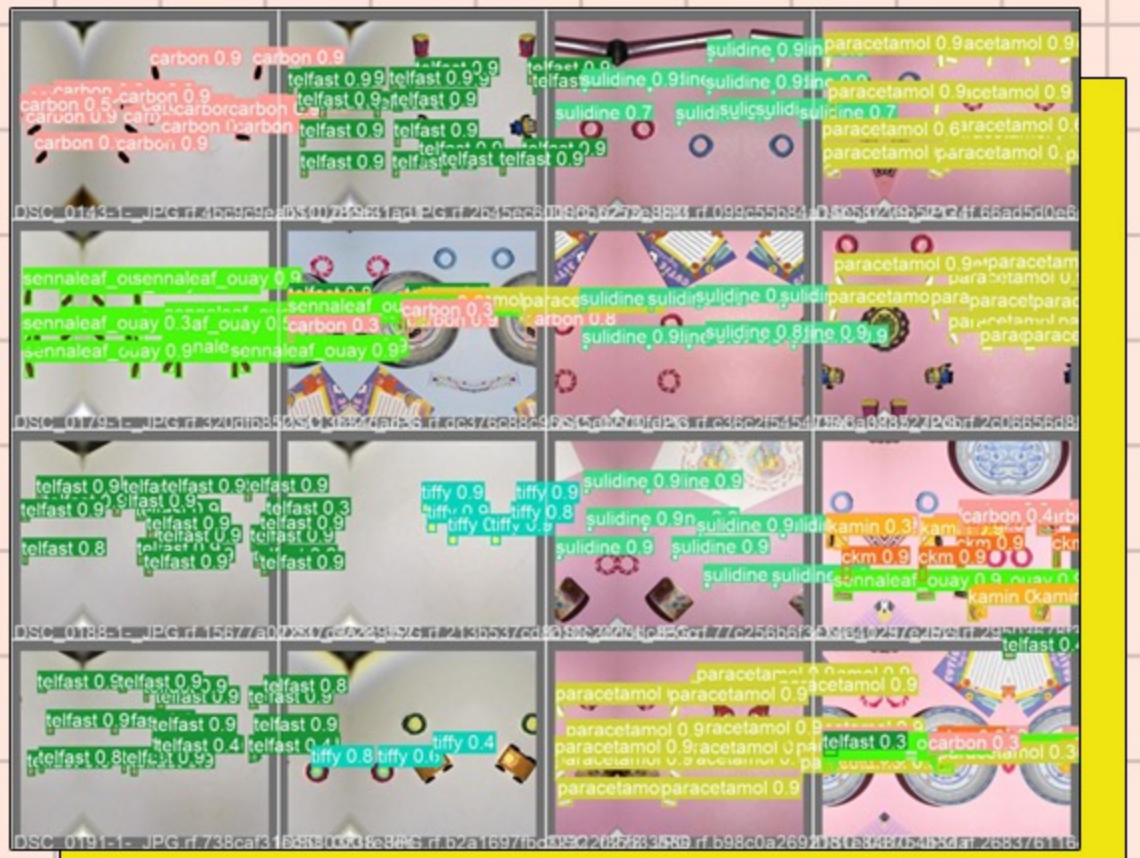
CONFUSION MATRIX



VALIDATION

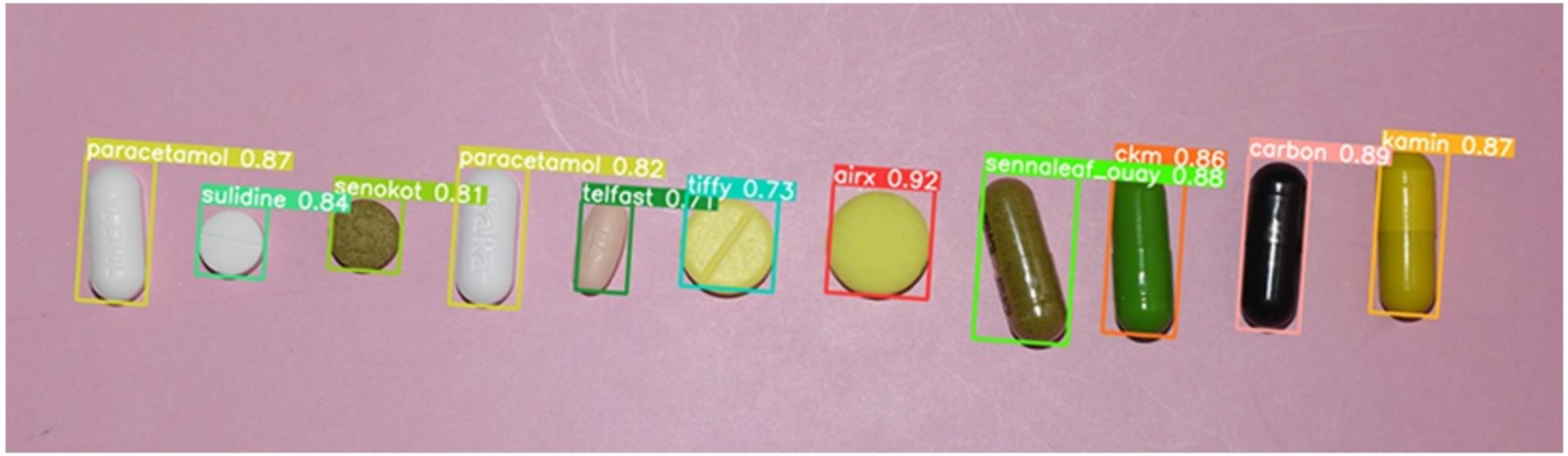


LABEL

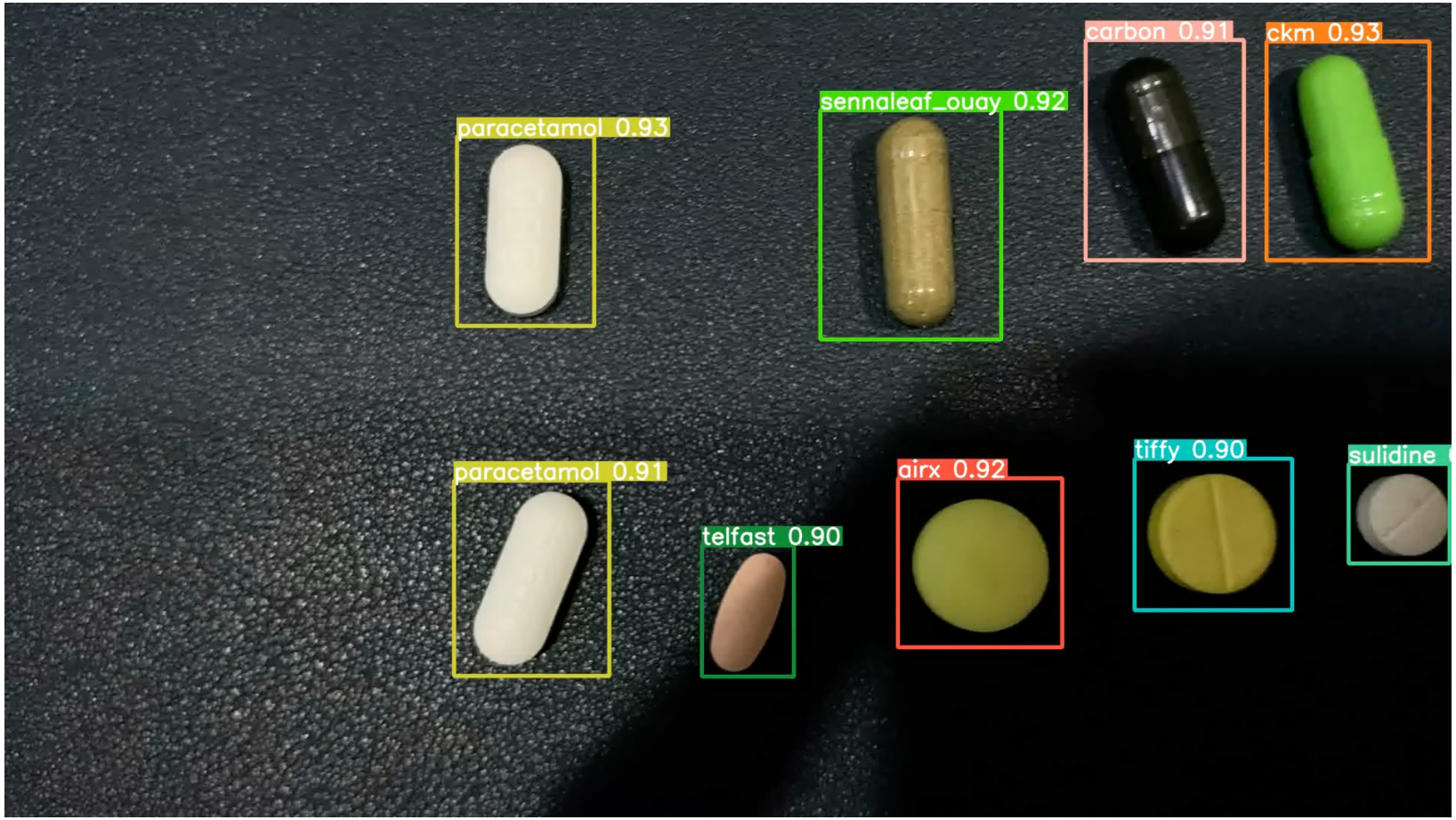


PREDICT

RESULT


paracetamol 0.87
sulidine 0.84
senokot 0.81
paracetamol 0.82
telfast 0.71
tiffy 0.73
airx 0.92
sennaleaf_ouay 0.88
ckm 0.86
carbon 0.89
kamin 0.87

RESULT


paracetamol 0.93
sennaleaf_ouay 0.92
carbon 0.91
ckm 0.93
paracetamol 0.91
telfast 0.90
airx 0.92
tiffy 0.90
sulidine

WEEK 1

PROJECT PROPOSAL

WEEK 2

GATHER / LABEL DATASET

WEEK 3

TRAIN MODEL

WEEK 4

TEST MODEL

WEEK 5

FINE TUNING MODEL

TIME planning

THANK
YOU
THANK
THANK