

Portfolio Week 6

COS40007 - Artificial Intelligence for Engineering
Studio 1-1 (12:30-2:30)

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Part 1: [Convert the given annotation format in training labels to the YOLO annotation format](#)

Part 2: Train and create a YOLO model by randomly taking 400 images from train data which can detect graffiti in the image

400 data points are chosen manually and randomly from the image and label files for training.

320 (80%) are used for training and 80 (20%) for validation purposes.

Best model: [best.pt](#)

Part 3 & 4: 40 images from test data and compute IoU (IoU value of 80% images in your test data is over 90%) for each and generate a CSV file

In the provided link are CSV files compiled with IoU values and confidence scores with the folder of the best 2 images for each iteration.

Table 1. Iterations and relevant documents

Model 1	Model 2 (model 1 retrained)
Iteration 1	Iteration 1
Iteration 2	Iteration 2
Iteration 3	Iteration 3
Iteration 4	Iteration 4
Iteration 5	Iteration 5
Iteration 6	Iteration 6
Iteration 7	Iteration 7
Iteration 8	Iteration 8
Iteration 9	Iteration 9
Iteration 10	Iteration 10

Part 5: Detect graffiti in real-time video data:

Table 2. Video data graffiti detection.

Model 1	Model 2 (model 1 retrained)
Video 1	Video 1
Video 2	Video 2
Video 3	Video 3
Video 4	Video 4
Video 5	Video 5
Video 6	Video 6

[Step 2, 3, 4, 5](#)