LAB Logbook

Lab 1

A graph with orange dots

Description automatically generated

Lab 2

Test accuracy: 0.940

A screenshot of a computer

Description automatically generated

A graph of a graph showing a line

Description automatically generated with medium confidence

A graph showing the growth of a number of people

Description automatically generated

Lab 3

Model's Test Accuracy: 91.24%

A screenshot of a computer

AI-generated content may be incorrect.

Lab 4

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

A graph with red and blue lines

AI-generated content may be incorrect.

Lab 5

1. Plot of the model's summary

A black screen with white text and green text

AI-generated content may be incorrect.

A computer screen shot of a black screen

AI-generated content may be incorrect.

A black screen with white text

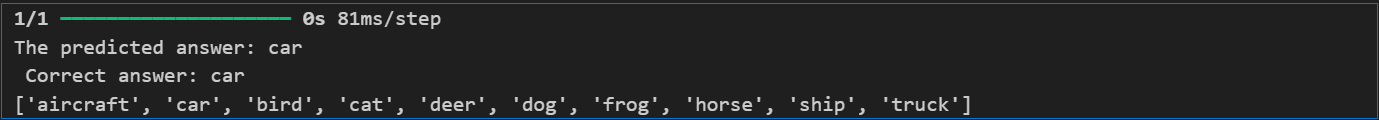
AI-generated content may be incorrect.

2. A graphical representation depicting the train loss and validation loss trends.

A graph of training and validation loss

AI-generated content may be incorrect.

3. Based on this analysis, determine the optimal number of epochs for training your model.

Optimal number of epochs: 11A blurry image of a car driving on a road

AI-generated content may be incorrect.A graph with green bars and numbers

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Lab 6

1.A screenshot of a computer

AI-generated content may be incorrect.

2

2.1

A screen shot of a computer program

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2.2

A screenshot of a computer

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3.

A graph with a line graph and a chart with a line graph and a chart with a line graph and a chart with a line graph and a chart with a line graph and a chart with a

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4.

A screen shot of a computer code

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Lab 7

1. Plot graphs for Accuracy and Loss Function for VGG16 and VGG19 (4 graphs in total).

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A graph of a number of red and blue lines

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2. Based on this analysis, determine the optimal number of epochs for training your VGG16 model.

A screen shot of a computer code

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3. Add the final Performance Table

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4. Plot the performance comparing histogram of VGG16 and VGG19

A graph of error statistics

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Lab 8

1 - LSTM architecture using model.summary()

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2 - code and training result using model.fit()

A screen shot of a computer program

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3 - the resulting test MSE & MAE and

A graph with blue and orange lines

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A graph with orange and blue lines

AI-generated content may be incorrect.

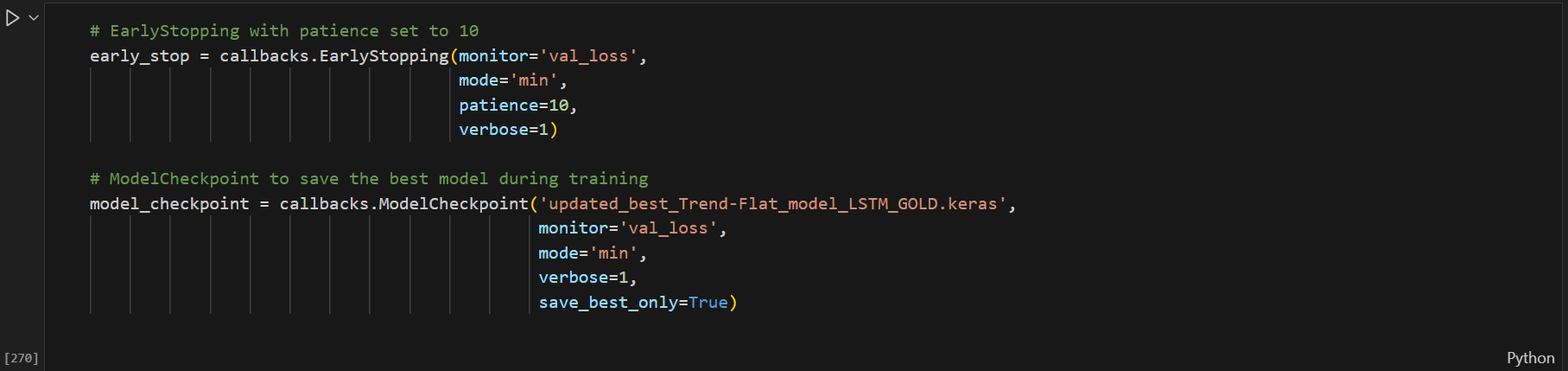
4 - MAE detailed graph.

A graph with a line graph and numbers

AI-generated content may be incorrect.

Lab 9

1 - code your Use EarlyStopping() and ModelCheckpoint() functions



2 - code and training result using model.fit()

A computer screen with text on it

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A screenshot of a computer program

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3 - the resulting test Accuracy and other error metrics for the classification task using classification\_report().

A screenshot of a computer program

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4 - Accuracy detailed graph

A graph with red blue and green lines

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Lab 10

Task 1

- Encoder, Decoder and Basic Autoencoder models using summary()

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Task – 2

- Table of your model autoencoder.summary()

A screenshot of a computer program

AI-generated content may be incorrect.

- Code of your autoencoder.fit()

A screen shot of a computer

AI-generated content may be incorrect.

- Accuracy detailed graph

A graph with blue dots

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- Document the plot of the decoded images for task 2. Change the colour, appearance, and shape of the plot according to your own choice (see plt.figure() parameters).

A group of yellow and blue numbers

AI-generated content may be incorrect.

Lab 11

A screenshot of a computer

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Lab 12