ECE 50024

Homework 3

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## Exercise 1:

Graphical user interface, text, application

Description automatically generated

Graphical user interface, application, table, Word

Description automatically generated

Graphical user interface, application, table, Excel

Description automatically generated

A picture containing text, parking, screenshot, document

Description automatically generated

Graphical user interface, application

Description automatically generated

Text, letter

Description automatically generated

## Exercise 2:

Graphical user interface, application

Description automatically generated

* The first few values in are: [[0.48249575] [0.4864399 ]]
* The first few values in are: [[0.44080734] [0.43871359]]
* The first few values in are:

[[0.064484 0.0369168 ]

[0.0369168 0.06623457]]

* The first few values in are:

[[0.04307832 0.03535405]

[0.03535405 0.0424875 ]]

* = 0.83, = 0.17

1. Predicted Binary Mask

A picture containing text

Description automatically generated

1. Mean Absolute Error = 0.087642

A picture containing dark, outdoor object, night sky

Description automatically generatedA dog lying in the grass

Description automatically generated with medium confidence

Test image mask

Test image

1. Test image and mask

The testing image does not perform well with the given Bayesian decision rule. This could be because the Class 1 pixels in the test image do not follow a similar distribution to the training pixels, and hence as misclassified.

## Exercise 3:

Text

Description automatically generated

c)

Graphical user interface

Description automatically generated with medium confidence

d)

Chart, line chart

Description automatically generated

# APPENDIX