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**ECE 2390 – Fall 2021**

**Problem Set 3 Report**

PROBLEM 1

1a.

A screenshot of a computer

Description automatically generated with medium confidence

Graphical user interface

Description automatically generated with medium confidence

I generated the <u, v> projections for all 20 points, but the first and last ones are at the beginning and end of the array, respectively.



1b.

Text

Description automatically generated

It seems like generally, the residual values increase as k increases. This occurs because the extra points result in a phenomenon similar to overfitting, which causes the residual to be higher on the set of 4 points used to check the residual.

A picture containing text

Description automatically generated

1c.

A screenshot of a computer

Description automatically generated with low confidence

PROBLEM 2

2a. F~ is below.

Text

Description automatically generated

2b. F is below.

Text

Description automatically generated

2c. ps3-2-c-1.png

A picture containing text, indoor, ceiling, worktable

Description automatically generated

Ps3-2-c-2.png

A picture containing text, indoor, ceiling, area

Description automatically generated