Lab 4 - Acoustic Emanation Attacks Computer Hardware and System Security(EECE5699)

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1. A table showing accuracy test for all 26 keys

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Testing Model Accuracy on Test Files:
Testing soundfile a-test.wav: First: 7
                                         Second: 0
                                                      Third: 0
Testing soundfile b-test.wav: First: 6
                                         Second: 1
                                                      Third: 1
Testing soundfile c-test.wav: First: 3
                                         Second: 3
                                                      Third: 1
Testing soundfile d-test.wav: First: 5
                                         Second: 2
                                                      Third: 1
Testing soundfile e-test.wav: First: 6
                                         Second: 1
                                                      Third: 1
Testing soundfile f-test.wav: First: 4
                                         Second: 3
                                                     Third: 1
Testing soundfile g-test.wav: First: 0
                                         Second: 4
                                                      Third: 2
Testing soundfile h-test.wav: First: 1
                                         Second: 3
                                                      Third: 1
Testing soundfile i-test.wav: First: 0
                                         Second: 0
                                                      Third: 0
Testing soundfile j-test.wav: First: 7
                                         Second: 1
                                                      Third: 0
Testing soundfile k-test.wav: First: 4
                                                      Third: 2
                                         Second: 1
Testing soundfile l-test.wav: First: 6
                                         Second: 0
                                                      Third: 2
Testing soundfile m-test.wav: First: 5
                                                      Third: 0
                                         Second: 0
Testing soundfile n-test.wav: First: 7
                                         Second: 1
                                                      Third: 0
Testing soundfile o-test.wav: First: 5
                                                      Third: 1
                                         Second: 2
Testing soundfile p-test.wav: First: 7
                                         Second: 1
                                                      Third: 0
Testing soundfile q-test.wav: First: 5
                                         Second: 1
                                                      Third: 0
Testing soundfile r-test.wav: First: 5
                                         Second: 3
                                                      Third: 0
Testing soundfile s-test.wav: First: 6
                                                      Third: 0
                                         Second: 1
                                                      Third: 0
Testing soundfile t-test.wav: First: 7
                                         Second: 1
Testing soundfile u-test.wav: First: 3
                                         Second: 3
                                                      Third: 1
Testing soundfile v-test.wav: First: 3
                                                      Third: 1
                                         Second: 0
Testing soundfile w-test.wav: First: 7
                                         Second: 0
                                                      Third: 0
Testing soundfile x-test.wav: First: 7
                                                      Third: 0
                                         Second: 0
Testing soundfile y-test.wav: First: 6
                                         Second: 1
                                                      Third: 0
Testing soundfile z-test.wav: First: 5
                                         Second: 1
                                                      Third: 0
```

2. Recovered secret

Recovering Secret Data:

Secret File: secret0.wav Secret Predictions: First Most likely:parsword Second likely:uszdrpsu Third likely:qgwaudwp

Secret File: secret1.wav
Secret Predictions:
First Most likely:roodroot
Second likely:eipuoqqe
Third likely:dmkwdupw

Secret File: secret2.wav Secret Predictions: First Most likely:weatdear Second likely:qfshadsd Third likely:ssdfssda

3. Best Guesses for the Keys:

Secret0.wav: password
Secret1.wav: rootroot
Secret2.wav: eastward