ELECTRICAL ENGINEERING DEPARTMENT
COLORADO SCHOOL OF MINES

Name Eric Sobczak

Goal for exercise – "Introduction to Python and Raspberry Pi"

Goal for this exercise was to familiarize myself with coding/working on a raspberry pi, as well as learning how to code more advanced concepts in python such as Finite State Machines.

What do you know about Pi computers and Python?

I have worked with python and open cv on the raspberry pi before. I have spent a good amount of time with a Pi 2. Specifically I have worked with the GPIO pins, I2c,libraries and pip. I am fairly familiar with the command line commands on the Pi, just don't have them memorized. I have don't a lot of coding in Python, its ease of use made it my preferred language for many years.

List all resources and what specifically you used or learnt from that resource to complete the challenge exercises.

I was previously in familiar with NumPy. By using their technical documents I was able to greatly reduce the difficulty of exercise 1. Specifically I looked up their technical documentation on their Max, Min, Size, Where, Flip, Sort and Argsort functions.

It has also been a while since I've coded in Python, so their were a few small things I forgot including the exact syntax for "for" loops and how to handle exceptions with try. I found answers to my questions through google, specifically on forum sites. I also wanted to clean up my printing so I did some researching on printing special characters and tabs in python.

The included FSM examples gave me reference on how I could code my own FSM in Python.

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Compile a list of all documentation created. Provide file name and a short description of that file.

All of my documentation is within "assignment1_documentation.pdf". This file contains both answers to the assignment questions and the code for both exercise 1 and 2. The header of the exercise code provides both run instructions and the basics of how it works. The foot contains the various online resources I used to write the code.

Provide an example of something that you would do differently or you could improve upon during the course of this exercise.

I feel like I could do a better job handling the exceptions in excise 1. While I do printout my own error message, python is still the one automatically halting the application. I would like to implement a system where the user can type in the file name, and have the choice of typing in another if it is invalid. Overall adding user input to exercise 1 would beneficial. Write now you would have to change the code if you want to switch from even to odd sorted for example.

On a scale of 1-5, what is your comfort level with Pi computers and Python after going through this exercise? (1 being least comfortable and 5 being most comfortable).

1 2 3 4 (5)