



ARTIFICIAL
INTELLIGENCE

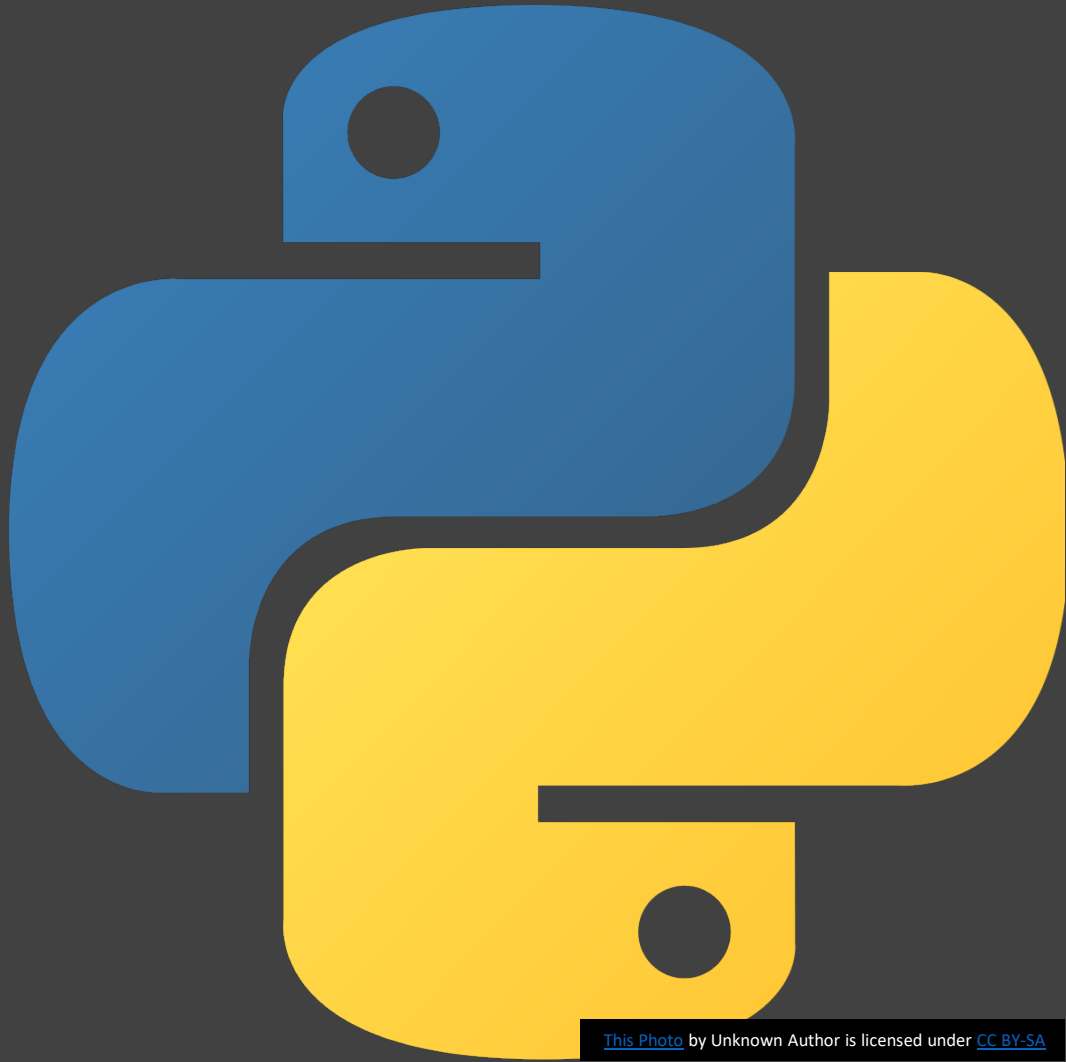
Artificial Intelligence Week Two Presentation

By Sawyer Slack

What I have done this week

- I have been working on Python to help better understand coding.
- I have been using Heroku for learning about cybersecurity.
- Both websites give me an understanding of the project





[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

Python

- I have been using Python during this week.
- Most of my Python coding experiences involved bringing in a file for the A.I. to study or make changes to its answer.

Python A.I. steps

1. I would download an Excel sheet and save it to my files.

2. I would import the file to my Python code.

3. The A.I. will read the information after setting up the code for Python.



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

Python examples

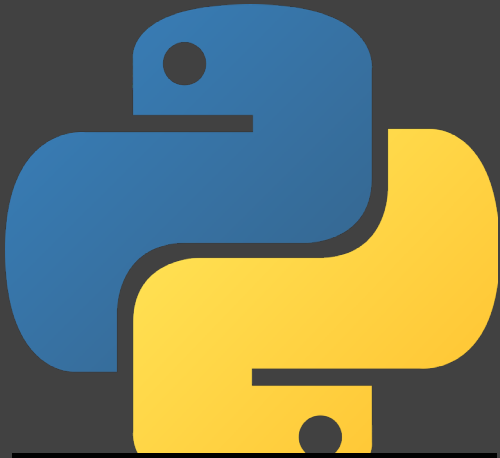
- I used Python to change the A.I.'s predictions from a number to letters.
- The A.I. will mostly guess the letter correctly.
- The A.I. sometimes would not know the letter or guess it incorrectly.

```
for x in range(28):
    x_test[0][row][x] = newMatrix[row][x]

return x_test[:1]

def guess(li):
    model = tf.keras.models.load_model('epic_num_reader.model')
    product = model.predict(li)[0]
    print(product)
    max = 0.8
    t = -1

    #t = (np.argmax(product[0]))
    for i in range(len(product)):
        if max < product[i]:
            max = product[i]
            t = i
    print("I predict this letter is a:",())
    window = Tk()
    window.withdraw()
    messagebox.showinfo("Prediction", "I predict this number is a: " + str(t))
    window.destroy()
```



This Photo by Unknown Author is licensed under [CC BY-SA](#)

```
import sklearn
from sklearn import linear_model
from sklearn.utils import shuffle
from sklearn.neighbors import KNeighborsClassifier
import matplotlib.pyplot as pyplot
from matplotlib import style

data = pd.read_csv("Home Prices.csv")
print(data)
data = data[["State", "Year-Quarter", "Average Price", "Median Price"]]
print(data.head())
column = "Average Price"
x = np.array(data.drop([column],1))
print(x)
y = np.array(data[column])
print(y)
x_train, x_test, y_train, y_test = sklearn.model_selection.train_test_split(x, y, test_size =0.1)

best = 0
for _ in range(30):
    x_train, x_test, y_train, y_test = sklearn.model_selection.train_test_split(x, y, test_size =0.1)

    linear = linear_model.LinearRegression()
    with open("studentmodel_pickle", "wb") as f:
        pickle.dump(linear, f)
```

```
best = 0
for _ in range(30):
    x_train, x_test, y_train, y_test = sklearn.model_selection.train_test_split(x, y, test_size =0.1)

    linear = linear_model.LinearRegression()
    with open("studentmodel_pickle", "wb") as f:
        pickle.dump(linear, f)

    pickle_in = open("studentmodel_pickle", "rb")
    linear = pickle.load(pickle_in)
pyplot.ylabel("Average Price")
pyplot.show()
float_num = float(str_num)
print(float_num, type(float_num))
```

Python examples

- I used Python to find the average house price for 2011.
- The A.I. would calculate the house prices from each state to find the average.
- It is like the other example since I had to use a string to change the output design.

Heroku

Heroku has different simulations to fix problems.

I used Heroku to find out problems in cybersecurity.





Heroku

- Heroku had simulations for me to use to find out ways to complete a certain task for cybersecurity.
- The task usually used different loopholes around different problems

Why is this important

It is important to use both of the coding programs because Python can help my coding skills.

Heroku can help my understanding of cybersecurity.

Using an A.I. for Cybersecurity is the role in the project.

```
... or object to mirror...
mirror_mod.mirror_object = ...
operation == "MIRROR_X":
mirror_mod.use_x = True
mirror_mod.use_y = False
mirror_mod.use_z = False
operation == "MIRROR_Y":
mirror_mod.use_x = False
mirror_mod.use_y = True
mirror_mod.use_z = False
operation == "MIRROR_Z":
mirror_mod.use_x = False
mirror_mod.use_y = False
mirror_mod.use_z = True

... selection at the end -add
... ob.select = 1
... ob.select=1
... context.scene.objects.acti
... selected + str(modifie
... mirror_ob.select = 0
... bpy.context.selected_ob
... data.objects[one.name].sel

print("please select exactly

--- OPERATOR CLASSES ---

... types.Operator):
... X mirror to the selected
... object.mirror_mirror_x"
... rror X"
```

A 3D rendering of a field of dark grey question marks. In the center, one question mark is highlighted in a bright yellow color. The word "Questions" is written in white, sans-serif font across the yellow question mark.

Questions