Algorithmic-Avengers

Qimora Mason, Eyad Kathir, Coreen Mullen, Aniya Hopson

Team Colors: Purple, Brown, Orange

Challenges & Research Answers

> First Day: Started research into Geopy and what functions it has to help with longitude and latitude.

> Loaded data.

> What are Atlanta's Coordinates?

> 33.7488° N, 84.3877° W

> What distance is the ISS visible to the naked human eye?

> 400 kms. = 248.548 mi.

> How fast does the ISS travel around the world?

> The ISS travels at 17,400 mph around the earth. The ISS orbits the entire earth in just 1 hour and 30 minutes.

Code Result Snippets

The ISS is visible at an altitude of -3644.95734238216 kilometers with a velocity of 7.6562769664919434 km/s.

```python
# Getting Atlanta's coordinates
geolocator = Nominatim(user_agent="my_geocoder")
atlanta_location = geolocator.geocode("Atlanta")
atlanta_coordinates = (atlanta_location.latitude, atlanta_location.longitude)
print("Atlanta's coordinates are :", atlanta_coordinates)
```

Atlanta's coordinates are : (33.7489924, -84.3902644)

```python
print("latitude:", lati_for_current)
print("longitude:", longi_for_current)
x = float(sv['X']['#text'])
y = float(sv['Y']['#text'])
z = float(sv['Z']['#text'])
this_epoch=time.strftime('%Y-%m-%d %H:%m:%S', time.strptime(sv['EPOCH'][:-5], '%Y-%jT%H:%M:%S'))
```

latitude: 2137.89172212209
longitude: -5622.28707320924

Progress

> Hang up: Working with the .xml code. We chose to use grit to keep persevering.

Our code shows that the ISS never flew over the EXACT co-ordinates of Atlanta in the X, Y, Z format.

> Our Plan for Topography

Plotting was to do a beginning working tow

scatter plot of the ISS

Over the entire earths map & We do have a

beginning working toward a plot.

> Our code was also able to find the

Velocity and Visibility of the ISS.

NASA: Fireballs Reported by Government Sensors 1988 - 2022