Waffle charts :-

→ A waffle chart is an interesting visualization that is normally created to display progress toward goals.

→ matplotlib doesn't have a built-in function to create waffle charts.

Word clouds :- A word cloud is a depiction of the frequency of different words in some textual data.

→ the more a specific word appears in a source of textual data bigger and bolder it appears in the word cloud.

→ Andre Muellers word cloud generator

Seaborn and Regression Plot

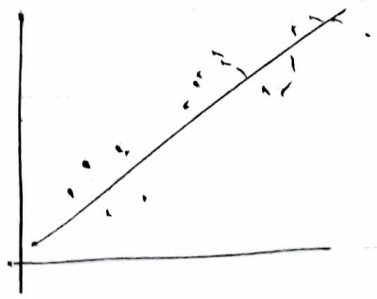
→ Seaborn is a Python visualization library based on matplotlib

Regression Plots

```
import seaborn as sns
ax = sns.regplot(x='year',
  y='total', data=df_tot)
```

df_total

year	total
⋮	



can change
→ colour
→ marker

PyWaffle → True

* Introduction to Folium ?

→ Folium is a powerful python library that helps you create several types of Leaflet maps.

python → geostatical data

→ It enables both the binding of data to a map for choropleth visualizations as well as passing visualizations as markers on the map.

→ The library has a no. of built-in tilesets from openstreetmap, mapbox, and stamen, and support custom tileset with mapbox API keys.

Creating a World map :-

```
# define the world map
world_map = folium.Map()
# display world map
world_map
```

the maps created by python are interactive

default map style = open street map

↳ which shows boarder of all countries

* Creating maps of canada :-

latitude and longitude

```
world_map = folium.Map(location=[56.130, -106.35],
                       zoom_start=4)
# display world map
world_map
```

zoom_start=4 → easily change zoom level

* map styles - Stamen Toner

{ tiles = 'stamen toner' }

Stamen toner map of canada

→ great visualization and ... for costed zone

* map styles - stamen Terrain

{ tiles = 'stamen Terrain' }

→ hills shading and natural vegetation colors.

Maps with Markers

To place marker at particular group

→ feature group

```
ontario = folium.map.FeatureGroup()
                                  ↓
                                Empty

ontario.add_child(
    folium.feature.CircleMarker(
        [51.25, -85.32], radius=5,
        colour='red', fill_color='red'
    )
)

canada_map.add_child(ontario)
```

→ pop up parameter to add text

Choropleth maps

higher measurement → darker color

Geojson file

→ to define boarders and boundary