Data Visualization Mini Course
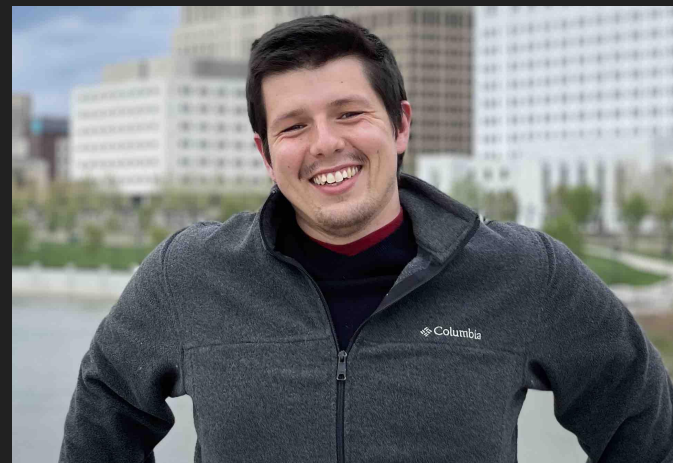
Introduction

Welcome!

- Welcome to the Data Visualization Mini Course!
- In this course we will:
  - Learn technical skills
  - Discuss data visualization best practices
  - Have fun!

Instructor

- Matthew Osborne, PhD
  - Head of Boot Camps at the Erdős Institute
- Graduated from OSU Math in 2020
- Likes:
  - My cats
  - Reading
  - Going for walks
  - Baked goods

Prerequisites

- You **must** have a basic understanding of Python including how to install new packages
  - Check out out python prep materials if needed, https://www.erdosinstitute.org/python-prep
- Understanding of basic statistics and probability is helpful, but not needed
  - Probability Theory Review: https://docs.google.com/presentation/d/1BPdJqdOrtxoBkBnP1iqzZtw0tPRkmRZdcgZm0oiTc9s/edit?usp=sharing
  - Basic Statistics Review: https://docs.google.com/presentation/d/1IOOEeCWw3c19dHhGAxHH0FqEajxId_hK3Qb9e6rQ1Hs/edit?usp=sharing

What we will cover

- Python
  - matplotlib
  - seaborn
  - bokeh
  - plotly
- Web-based visualization
  - HTML
  - CSS
  - SVG
  - d3.js
- Basic Tableau

Mini Course Format

- Eight weeks long
  - Six week of lectures and activities
  - Two weeks to work on final project
- Asynchronous lectures
  - Hosted on Erdős Institute website
  - Files needed for lectures found at the github repository, https://github.com/TheErdosInstitute/data-viz
    - Contact the community organizer for access
- Activities every one to two weeks
  - Also found on the repository

Final Project

- Must complete a final project to receive a certificate of completion
- Projects can take a variety of forms including:
  - An interactive dashboard
  - A data essay
  - A larger data visualization poster
  - A series of visualizations used as a part of your academic study
  - And more
- You may work by yourself or in small groups.

Let's Get Started!

- We will start with python
- Then web-based visualizations
- End with Tableau