Outline for Data Story
Jul 23 Version 2, Xinru Cheng

- Conclusion:
    - News at the time of writing: on July 12, Oklahoma passed law that prohibits abortion except when necessary to save a woman's life. This puts the US State in the same category as countries like Bangladesh, Syria, and Somalia, and only slightly more protective of women's reproductive rights than countries such as Iraq, Haiti, and Congo, which prohibit abortion altogether.
    - By visually comparing restrictions on abortion in US States and countries of the world, we see drastic variations across the US and around the world. Most countries are making progress in protecting reproductive rights of women and allowing abortion (on July 22 Northern Ireland made progress and lifted their abortion ban), but some US states are further restricting these rights.
- The most interesting results:
    - Compare US with world regions and countries, as well as among US States themselves; compare different datasets and see how they correlate with restrictions on abortion (may not get through all of them):
        - Main visualization: Map of abortion laws in world countries and US States
        - Supporting graphs: Abortion rate by region or State - according to 2014 data, New York State has the highest abortion rate (number of abortions per 1000 women aged 15-44), while South Dakota and Utah are tied for the lowest.
        - Unintended pregnancies ending in abortion (world and US)
        - Percentage of women living in counties without abortion providers (US)
- Details about the type of plot and datasets used
    - Show main visualization and explain features and conclusion; put technical details in tutorial
- General background info:
    - Various states recently tried to pass similar restrictive laws, blocked in courts: in Alabama, Arkansas, Kansas, Kentucky and Texas (up to July 2019)
    - What if Roe v. Wade fell? (won't go into too much speculation here, but can include link I found on research by legal experts)
- Plans for further work on this project (keep updating as new regulations come into effect)
    - Investigate more factors that could affect ease of access to abortion (such as health insurance coverage, wage gap and percent of women in labour force)
    - compare progress over time (5, 10, 20 years - hard to find matching data for world and US)
- References (or give GitHub link with references)

Outline for Tutorial

- Finding and cleaning data using Pandas (can make this bullet point really short and jump into visualization, depending on required length of tutorial)
    - Using multiple data sources, in CSV, XLS, as well as from PDF research reports and tables displayed on websites
    - Import from CSV into Jupyter Notebook using Pandas
- Choosing a graphing package: Plotly or Folium, and why (if have time, do both)
    - Plotly works well for hovering cursor to display info box
    - More familiar with Folium choropleth map, can also talk about how to solve the deprecating library issue
    - Basic installation process, what system and version we are using
- Make a choropleth map with a small and simple dataset to test whether graphing package can do what we want:
    - GeoJSON for geographic base layer, showing US States
    - Color-coded top layer
    - Adding display for cursor hovering (Plotly)
- More comprehensive graph of world countries and US States
    - Adjust scale to display both world and US geographic maps as base
    - Adjusting other plot features (aesthetic)
    - Other plot types (using Python basemap package instead of GeoJSON); suggestions