Schedule for “Data Visualisation”, 9-13 December 2019.

Monday 9 December

1. Welcome and outline of the course
2. Six questions: a framework for crafting data visualisations
3. Understanding data types, summary statistics and smoothers
4. R exercises exploring datasets
5. Sketching and user-testing
6. Choosing how to encode data or stats as an image
7. Aspects of consulting
8. R exercises with base graphics and ggplot2
9. Concepts of time series analysis and their relevance for visualisation
10. Homework: choose a chart from a selection and critique it

Tuesday 10 December

1. Homework discussion
2. Quantifying and visualizing uncertainty
3. R exercises using the bootstrap
4. Design ideas to enhance understanding of visualisations
5. Exercises with color schemes and semi-transparency
6. The role of annotation or prolegomena
7. Scalable Vector Graphics (SVG)
8. SVG exercises in Inkscape and the text editor
9. First video call with Dr Tim Morris: introducing the project

Wednesday 11 December

1. Discussion of ideas for the project
2. Causal and predictive models
3. Wrapping the visualisation in a poster, storytelling, or other package
4. Animation with ffmpeg
5. Interactivity with Flourish
6. Animation or interactivity exercise
7. Time to work on the project

Thursday 12 December

1. Web essentials: putting together HTML, CSS and JavaScript
2. Mapping and principles of geospatial data
3. Exercise with Mapbox
4. Exercise with ggmap
5. Second video call with Dr Tim Morris: pitching our solutions
6. Feedback and discussion on the project
7. Social evening

Friday 13 December

1. Techniques for multivariate / high-dimensional data
2. Techniques for big data
3. Introduction to the D3 and Leaflet JavaScript libraries
4. Automating visualisation as part of a data science pipeline
5. Time for each participant to work on specific tools that interest them
6. Closing discussion and farewell