Lecture 9

Bringing it all together
So far...

- Adopting a process
- Guided by a set of principles
- With a toolkit of techniques/methods and chart types
- Possibly including interactivity, annotation and composition
- This session is about bringing it all together
Formulating a brief

- Can be informal or formal
- Why are you producing THIS visualization?
  - What is the origin of the curiosity?
- Context
  - People
  - Constraints
  - Deliverables
- Vision
  - Tone, functional experience, style
  - What are you trying to accomplish? Imparting messages or enabling discovery?
Why are you producing THIS visualization?

• Articulating your curiosity will focus decisions about what data to gather, what analysis to conduct and what features to represent
  – Forming a question is a good place to start
• There will be many features you can explore – why slice it that way?
  – A key activity in the process is exploring the data, unlocking the key qualities, trying things out and therefore determining what is most relevant or interesting
• Sometimes the curiosity does not originate from you
  – Stakeholders
  – Known or anticipated interest of the audience
The visual representation and presentation of data to facilitate understanding about...

... the questions that received the most negative responses in the staff survey

... the areas of Europe where seasonal population changes are most extreme

... the products that were most profitable across the garden and leisure department

... the % turnout across the electoral regions of the UK

... the musical structure of all songs that have reached #1 in the UK charts
Context

• People
  – Stakeholders
  – Audience
  – You
• Constraints
  – Time
  – Technology
• Deliverables
  – Medium
Vision

• Who is your work for?
• What is your work for? What is the story? What do you need your audience to know or do?
• What data is available?
• How will you communicate it? What mechanism?
• How does that affect the tone: ‘reading’ or ‘feeling’
• What is the experience?
• Why is it important?
<table>
<thead>
<tr>
<th>Assignment Proforma</th>
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<tbody>
<tr>
<td>• What is the origin of the curiosity? Why do you want to produce THIS visualisation?</td>
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<tr>
<td>• What are my constraints? Think deliverables, medium, skills, technology, time</td>
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<tr>
<td>• Who are my audience/stakeholders? What do they need/expect?</td>
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<td>• What data will I use?</td>
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<td>• What is interesting about my data? What comes out in your initial exploration?</td>
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<td>• What is the story I want to tell?</td>
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<td>• How will I encode my data? What marks/attributes/chart types</td>
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<tr>
<td>• What is the experience I want to facilitate and how? What interactivity and annotation is required?</td>
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<tr>
<td>• What key design guidelines will I include &amp; evidence?</td>
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Initial Brief (20%)

- **Outline your brief in a 10-minute presentation, with a further 10 minutes for feedback.**
- For this part of the assessment, you will formulate and outline a brief for your final visualisation. This will be reported in a presentation which you should have **ready by 15 August 2022**, and we ask you to submit your slides (via Tabula) by 12.00 on that day.
- The module organisers will contact you to arrange a suitable time for you to give your presentation.
- Your presentation should include:
  - The motivating curiosity
  - The circumstances that will affect the project
  - A description of the dataset
  - A report on your initial understanding of the subject through the data
  - A description of your vision for the final visualisation
Initial Brief (20%)

Content (70% of this component)

- Knowledge/understanding
  - Demonstrates understanding of taught material around formulating a brief
  - The vision is well developed and supported through documentation of the process
- Individual research
  - Suitable background research conducted
  - Demonstrates an understanding of the subject through the data
- Use of evidence
  - Decisions are evidence-based

Communication Skills (30% of this component)

- Logical organisation/structure
- Well-prepared slides and presentation
- Audience awareness and engaging delivery
- Adherence to required time constraints
- Response to questions

This is an opportunity for feedback on your ideas ahead of the main components of the assessment
Visualisation (50%)

• For this part of the assessment, you will visualise a data set, system, or algorithm of your choice. This should be submitted as a Jupyter notebook (.ipynb) or a Processing Sketchbook by 12.00 on 30 August 2022 (via Tabula).

• Note: if you are providing a Processing Sketchbook, please also provide a readme file with any relevant instructions.
Final concept and Design (30% of this component)

- The visualisation is intentional and well developed
- The design demonstrates an understanding of the principles underpinning good visualisations

Technical proficiency (70% of this component)

- Source code compiles
- Code is consistent, clean, formatted and well documented.
- Clearly shows where data/code has been borrowed from other sources
- Demonstrates a level of technical skill

Visualisation (50%)
For this part of the assessment, you are asked to provide a technical report describing your work in 2000 words. This should be submitted as a pdf file by 12.00 on 30 August 2022 (via Tabula).

Your report should include
- Introduction
- Design
- Implementation
- Resulting visualisation
- Conclusion
Documentation (30%)

**Content (70% of this component)**
- Knowledge/understanding
  - Demonstrates understanding of taught material
  - Relevant application of taught material
- Individual research
  - Suitable background research conducted
  - Demonstrates understanding of material researched
- Depth of reflection/analysis
  - Empathises with and analyses different perspectives
  - Demonstrates critical self-awareness
  - Critical analysis of sources and perspectives
  - Critical evaluation of final visualisation
  - Evaluates sources and constructs well-reasoned balanced arguments
- Use of evidence
  - Discussion is evidence-based

**Communication Skills (30% of this component)**
- All components present
- Logical organisation/structure
- Language and technical writing skills
- Readability
- Appropriate length
- References are used appropriately
Final thoughts

• Good practice and guidelines to follow – they can be evidenced
• But there is lots of creativity involved too
• Try not to make the tools the limiting factor
• Iterate and seek feedback
• It takes time to build an understanding of the context, time to understand the audience, time to craft the vision, time to look at the data properly and determine how best to show it and time to refine the visualisation. It takes even more time to do it well
• Seek inspiration through good examples
• Enjoy it
• **Book a time slot for your presentation**
Feedback

• What’s gone well?  
• What can we improve?
Final Lab

- Cellular Automata
- Then to the Pub to wrap up!