

Data Visualisation and  
Dashboarding

# Coursework

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# What?

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Formulate a research question

Find data

Explore data using R, Power BI and/or Tableau

Create a data graphics narrative of your findings

# Deliverables

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## Report

No longer than 3000 words (that's about ten pages of text)

Short reports are not penalised – as long as it contains everything important!

## Feedback form

You must seek feedback from your peers

Upload feedback form

## Support files

You must submit any Power BI/Tableau/R files, modified data

# Report sections

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## Research question

Clear and concise. Not too narrow, not too broad, not too easy, not too hard.

Good:

- Is the stop-and-search practice in London racist?
- What are the different factors and trends affecting avoidable mortality in the UK?
- How did Covid lockdowns affect mobility in London?

Bad:

- What is the population of London? - trivial
- Different types of chicken used in market and prediction of production cost – not a question
- No question at all...

Data Acquisition

Preparation

Data Analysis

Visualisations

# Report sections

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Research question

State from where the data was downloaded

**Data Acquisition**

Describe the data (e.g. “this data shows the numbers of driving licenses by age, gender and postcode district between 2015 and 2020”).

Preparation

Data Analysis

Consider the data quality (“Driving licence changes are self-reported, therefore the data does not represent the actual numbers of drivers, etc.”)

Visualisations

Present and Initial Data Exploration (data quality, distribution, etc...)

# Report sections

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Research question

Which steps did you undertake to prepare the data?

Data Acquisition

How did you check the data? E.g. outliers, missing values, etc?

**Preparation**

What tools did you use?

Data Analysis

Visualisations

# Report sections

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Research question

Present the findings of your data analysis.

Data Acquisition

Should contain an **interesting narrative** leading from the general aspect to the detailed.

Preparation

**Data Analysis**

Show your graphics

Visualisations

Answer your research question!

Also: Reflect on used methods. What did work, what did not?

# Report sections

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Research question                      Justify the selection of graphics shown in previous sections.

Data Acquisition

Preparation

Data Analysis

**Visualisations**



# Where to get the data?

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UK open data portal [data.gov.uk](https://data.gov.uk)

Office for National Statistics [ons.gov.uk](https://ons.gov.uk)

Statistical data sets from gov.uk

[www.gov.uk/government/statistical-data-sets](https://www.gov.uk/government/statistical-data-sets)

London Datastore [data.london.gov.uk](https://data.london.gov.uk)

[Bank of England Database](https://bankofengland.github.io/)

UK Data Service [ukdataservice.ac.uk](https://ukdataservice.ac.uk)

NHS England data catalogue

[data.england.nhs.uk](https://data.england.nhs.uk)

Public health profiles [fingertips.phe.org.uk](https://fingertips.phe.org.uk)

NHS Open Portal [opendata.nhsbsa.net](https://opendata.nhsbsa.net)

EU [data.europa.eu](https://data.europa.eu)

UN data [data.un.org](https://data.un.org) / UN stats [unstats.un.org](https://unstats.un.org)

World Bank Open Data [data.worldbank.org](https://data.worldbank.org)

Access via Library:

[Mintel](#) – Market research

[Mediatel](#) – Media intelligence

[Factiva](#) – Global news and business information

[Statista](#) – Market data

Ask your librarian!

# Which tools can I use?

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Data preparation/transformation: Use Power BI, Tableau or R if possible, use Excel if necessary

Visualisations: Use a professional data visualisations software (Power BI, R, Tableau)

Don't use Excel!

If in doubt what a professional visualisation software is, ask me!

# How many visualisations do I need to produce?

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As many as are necessary!

Most papers need between five and fifteen visualisations

# Can two students use the same research question?

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This is an individual coursework and students need to submit their own work

There are virtually infinite research questions – what's the chance two students have the same one?

We will (and did) investigate similar reports for plagiarism!

# How to submit your coursework

Report: Upload word or PDF to Turnitin

Feedback form: Attach in “Feedback form”

Supporting files: Attach individually or as ZIP file



## Submit Coursework



Where an online submission is used through a link use this section. The submission links must be given the same name as the name of the coursework shown on SRS.



### Coursework report

Due date: 12/01/2023, 13:00



### Feedback form

Due date: 12/01/2023, 13:00



### Supporting files

Due date: 12/01/2023, 13:00

# Deadline

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3<sup>rd</sup> August 2023 – 1 pm BST

Late submissions have at least 10 points deducted

Not your fault? Submit MC claim!

# Questions?



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