# GUEST LECTURE: DATA

School of Informatics Professional Issues Course

27 November 2026

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THE UNIVERSITY *of* EDINBURGH
informatics

Designing Responsible Natural Language Processing




UK Research and Innovation

# A BIT ABOUT ME…

- PhD student in the CDT for Designing Responsible Natural Language Processing
- Interested in multilinguality of digital life, sociotechnical studies, linguistics, data and algorithmic justice.

**SUPERVISION TEAM**

**Alex Taylor**
**Reader in Design Informatics**

**Adam Lopez**
**Reader in Informatics**

# OVERVIEW

1. What is data?
2. Responsible data use: key issues
3. **Case Study**: Data in context
4. Responsible data use: key issues
5. **Case Study**: Categories and subjectivity
6. Sum up & recommendations

# WHAT IS DATA?



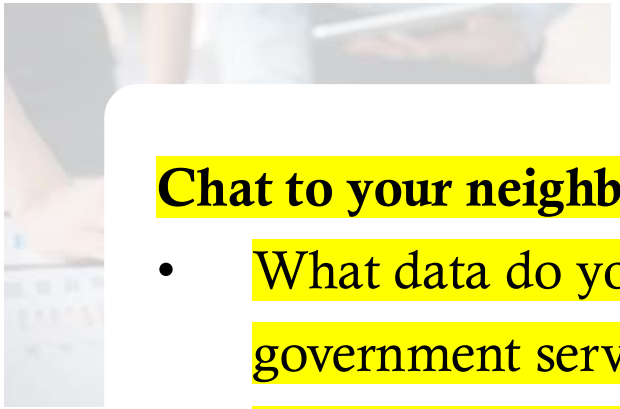






# WHAT IS DATA?

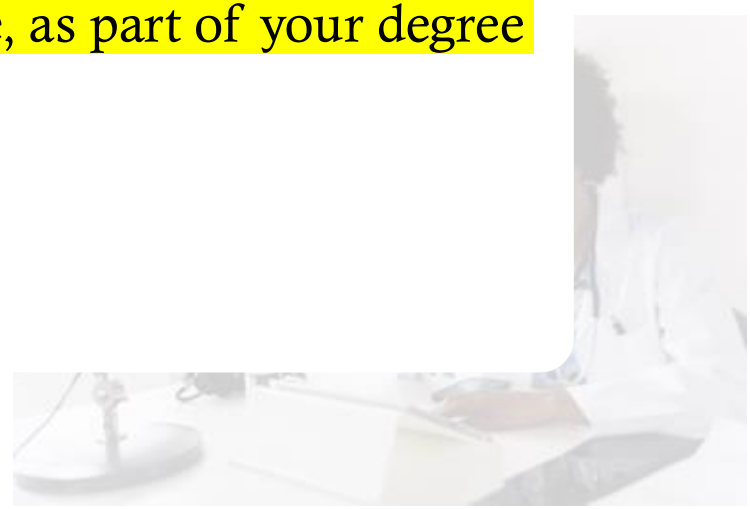




**Chat to your neighbour (2 mins):**

- What data do you use online, for social media, banking, health or government services, etc?
- What data or datasets have you used, or might you use, as part of your degree or work?
- How often do these two overlap?





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# RESPONSIBLE DATA USE: KEY ISSUES

## #1 WHAT'S IN THE DATA?

- Privacy[1] – personally identifiable information (PII)
- Representation[2] – large dataset ≠ lots of demographics
- Toxicity[3] – illegal or unwanted content

# RESPONSIBLE DATA USE: KEY ISSUES

## #1 WHAT'S IN THE DATA?

- Privacy[1]
- Representation[2]
- Toxicity[3]

## #2 HOW WAS IT CREATED OR COLLECTED?

- Consent[4] – was it obtained and *what* was it obtained for?
- Copyright[5] – what is fair use?
- Sovereignty[6] – who 'owns' the data?
- Synthetic data[7]

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# CASE STUDY: CRISIS TEXT LINE*

- Crisis Text Line is a not-for-profit mental health texting service.

*https://www.politico.com/news/2022/01/28/suicide-hotline-silicon-valley-privacy-debates-00002617

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- In 2022, *Politico* broke the story that CTL was giving its "largest mental health data set in the world" to its for-profit spinoff Loris.ai to train a customer service AI.

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**Chat to your neighbour (2 mins):**

- What are the key data issues for CTL?
- What are the ethical implications of using its data in this way?

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- Company lawyers argued that agreement was legal and "ethically sound" because users gave consent and data sharing was in the Ts&Cs…

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- Company lawyers argued that agreement was legal and "ethically sound" because users gave consent and data sharing was in the Ts&Cs…
- …But three days later, it announced it was terminating the agreement.

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Data harms are intimately connected to the context of data creation and use

# QUESTIONS?

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# OVERVIEW OF DATA HARMS

## #1 WHAT'S IN THE DATA?

- Privacy[1]
- Representation[2]
- Toxicity[3]

## #2 HOW WAS IT CREATED OR COLLECTED?

- Consent[4]
- Copyright? [5]
- Sovereignty[6]
- Synthetic data[7]

## #3 WHO LABELLED IT?

- Subjectivity[8] – what is the position of the participants, annotators and researchers?
- Annotators[9] – where and how are they sourced?

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# CASE STUDY: MULTILINGUAL NAME DISCRIMINATION IN LLM HIRING

- LLMs increasingly deployed in HR for decision-making.
- Previous studies have found bias on gender and race.
- Are there biases based on language, specifically names with diacritics:

  Irish – Seán, Máire, Croí
  French – Léna, Timéo, Céleste
  Portugese – João, Inês, Lourenço
  Latvian – Amēlija, Ričards, Luīze

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**Chat to your neighbour (2 mins):**

- How would you go about gathering your name dataset? Sources? Methods?
- What are the key issues that you might face?

# CASE STUDY: MULTILINGUAL NAME DISCRIMINATION IN LLM HIRING

- Popular names
- Baby name sites
- Archaic
- What are you measuring?

# CASE STUDY: MULTILINGUAL NAME DISCRIMINATION IN LLM HIRING

- What is an Irish name? Or an English name? Or a French one?
- Language contact and –icisations
  - Darragh for Dáire, Gaelicisation: Seosamhín for Josephine
- Names are not good proxies for anything else.
- Again, what are you measuring?

Researchers must understand and account for subjectivity and interpretation of data

# QUESTIONS?

# RESPONSIBLE DATA USE: KEY ISSUES

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## #3 WHO LABELLED IT?

- Annotators[8]
- Subjectivity[9]

## #4 WHERE IS IT KEPT?

- Secure storage[10]
- Environmental costs[11]
- Open access?

Transparency is key to mitigating data harms.

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1 Data harms are intimately connected to the context of data creation and use

2 Researchers must understand and account for subjectivity and interpretation of data

3 Transparency is key to mitigating data harms

- Follow legal and regulatory guidance
- Follow your institution's ethics guidelines
- Think about who the data and the annotations include and exclude
- Think about whether the data can achieve the purposes you want it to
- Document and acknowledge any limitations

# QUESTIONS?

# REFERENCES


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