



# Scottish Graduate School of Social Science

Sgoil Cheumnaichean Saidheans  
Sòisealta na h-Alba

## Practical Computational Methods for Social Scientists

7, 13-14 March 2025

Dr Diarmuid McDonnell and Rhys Davies

Computational methods are transforming research practice across the disciplines. For social scientists these methods offer a number of valuable opportunities, including creating new datasets from digital sources; unearthing new insights and avenues for research from existing data sources; and improving the accuracy and efficiency of fundamental research activities.

In this three-day course you will learn how to apply computational methods for the collection, management and analysis of text data. Using Python and R, you will develop skills in collecting data from the web; preparing textual data for computational analysis; and core methods of text data analysis (e.g., sentiment analysis, topic modelling).

## Programme

### Day 1

|               |  |
|---------------|--|
| 10:00 – 10:10 | Welcome                                  |
| 10:10 – 10:30 | Lecture 1 – Fundamentals of web scraping |
| 10:30 – 11:15 | Practical 1 – Scraping simple webpages   |



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|---------------|---|
| 11:15 – 11:30 | Break                                   |
| 11:30 – 12:30 | Practical 2 – Scraping complex webpages |
| 12:30 – 13:30 | Lunch                                   |
| 13:30 – 14:00 | Lecture 2 – Fundamentals of APIs        |
| 14:00 – 15:00 | Practical 3 – Requesting data from APIs |
| 14:45 – 15:00 | Break                                   |
| 15:00 – 15:45 | Exercise 1 – Web-scraping challenge     |
| 15:45 – 16:00 | Conclusion                              |