

DATA1901 LAB01
TOPIC ONE

The background is a deep blue gradient. It is filled with a complex pattern of glowing yellow and white elements. These include binary digits (0s and 1s) of various sizes, some appearing as if they are floating or falling. There are also numerous star-like or lens flare effects, which are bright yellow with multiple points of light radiating outwards. The overall effect is one of high-tech, digital, or futuristic energy.

WELCOME TO DATA SCIENCE

ABOUT US

- » What are you studying?
- » What languages do you speak? (verbal and coding)
- » When you first started coding in R, how did you find it?

ABOUT YOU

- » What is your major / degree?
- » What languages do you speak? (verbal and coding)
- » What are you most excited for in university?
- » <http://tiny.cc/vlpouz>
- » Swap contact details / start a group chat

TOPICS



Exploring Data

Topic 1

Design of Experiments



Topic 2

Data and Graphical Summaries



Topic 3

Numerical Summaries



Modelling Data

Topic 4

Normal Model



Topic 5

Linear Model



Sampling Data

Topic 6

Understanding Chance



Topic 7

Chance Variability (The Box Model)



Topic 8

Sample Surveys



Decisions with Data

Topic 9

Hypothesis Testing



Topic 10

Tests for Mean



Topic 11

Tests for Relationship



Topic Overview



Imagine

Approx. 20min



Discover

Approx. 3hr



Challenge

Approx. 1hr



Explore

Approx. 1hr



Evaluate

Approx. 2hr



The background is a vibrant blue field filled with out-of-focus yellow and white light spots, creating a bokeh effect. Overlaid on this are faint, glowing digital patterns, including lines, squares, and rectangular frames, reminiscent of a circuit board or data visualization. The word "CHALLENGE" is prominently displayed in the center.

CHALLENGE

KEY IDEAS

- » Ethics and Privacy
- » Statistical thinking
- » Randomised Controlled Trial (RCT) vs Observational Study
- » Domain knowledge
- » Confounders
- » Precautions with observational studies

GROUP WORK

TAKE

BREAK

EXPLORE

RR

REMINDERS

- » Add your group members on socials / email
- » Work through the extra practice in challenge
- » Complete the evaluate quiz
- » Go to the evaluate lecture on Friday