

# Review and Exam Practice

I am Julie Williamson and you are sitting in the final  
HCI lecture of CS1F (IM review is on Thursday)

# HCI Round Up

- 5.5 Weeks, 10 Lectures
- Fourth year teaching this course
  - New Lab Exercises since 2018
- Assigned reading from a variety of sources

# User Interface Design

- Usability Heuristics
- Heuristic Evaluation
- Personas
- Scenarios
- Sketching Techniques

# Quantitative Evaluation Techniques

- What is quantitative data
- Continuous versus discrete data
- Methods for collecting and analysing data
- Populations and Samples
- Independent and Dependent Variables
- Within and Between Subjects
- Normal distribution
- How to Run an Experiment

# Qualitative Evaluation Techniques

- Usability versus User Experience
- What is Qualitative Data
- Methods for Collecting and Analysing Data
  - Interview
  - Observation
- Sources of Bias
- Open, Axial, and Selective Coding

# Implementing User Interfaces

- What is interaction
- Signals and human input
  - Control
  - Thresholding
- Feedback
- Dynamics
- Finite State Machines

# Ethics

- Ethical Procedures for running evaluations
- Informed Consent

# Writing an Exam Paper

- Write in Pen
- Write only on the front of each page
- Do not write in the margin



a) This question is about *quantitative evaluation techniques*. You have recently completed an evaluation of a student record management system that allows users to input and manage student records. You have collected a dataset that includes the task times for entering data into the system for twenty participants.

You selected your participants from a pool of administrators who are likely to use the system. What is this kind of selection called? [2]

How would you describe the quantitative data have you collected? [2]

Your analysis shows that the data is normally distributed. With respect to the mean and standard deviation, what does this say about your data? [4]

This question is about *implementing user interfaces*.

Being able to control interfaces is crucial for successful interaction. What is required to enable control, and why is this important? [4]

Continuous actions by a user need to be translated into discrete actions. How can this be achieved? [2]

Give an example of an interface that translates continuous action into discrete action, including the actions performed by a user, the signal that is generated, and how the signal is analysed. [5]

This question is about *qualitative evaluation techniques*.

How would you complete a semi-structured interview as part of a user study? [2]

Describe how you would analyse the results of a semi-structured interview using qualitative analysis techniques. [4]