



# scc.360

## Computer Science Seminars

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Dr Mo El-Haj

# SCC.360 Computer Science Seminars

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- Welcome
- Relax

Photo generated by DALL-E: realistic-looking cartoon dog, wearing glasses and reading a book in a university library.



# SCC.360 Team

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- Dr Mo El-Haj
- Senior Lecturer in NLP
- Infolab C35
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# SCC.360 TAs

- Molly O'Reilly-Kime



- Luke Halpin



# What is Computer Science Seminars!

- 5 in-person lectures (weeks 11, 13, 15, 17, 19)
- and 10 weeks of 2-hour workshops.
- You choose a computer science topic, investigate it, and discuss it in groups during workshops.
- No exams; assessment based on a Presentation and Written Report.
- Develop research and presentation skills, defending your position within the seminar group.

# Module approach

1. Topic Selection

2. Scoping Study / Lightning Talks

3. Draft Report

4. Presentation (CW1)

5. Final Report (CW2)

# It's all about engagement

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Lecture: a combination of research related topics and guidance on how to approach the deliverables. In addition, we have talks given by external guest speakers.



Workshops: you lead seminar-style discussions on chosen topics and develop research, presentation, and discussion skills.

# Workshops

Explore cutting-edge computer science-related topics

Guided reading, seminar-style in-depth study, and plenary presentations

Choose a research topic of interest and target an audience of choice

Develop research, presentation, and discussion skills in a flipped classroom setting

Interactive and engaging module to deepen your knowledge of computer science.



# Weight

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30% presentations

70% final report

No exams

# SCC.360 is feedback rich

- Verbal feedback
- Peers feedback
- Self-evaluation



# Topics

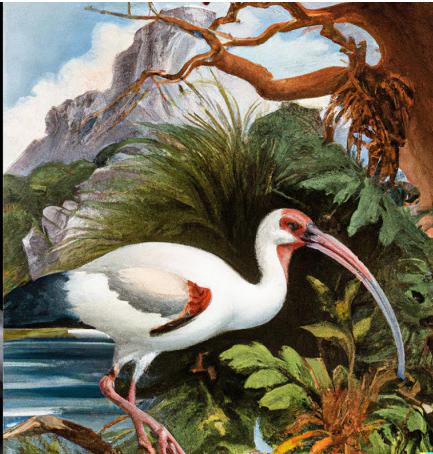
- Natural Language Processing
- Cybersecurity
- AI, Machine Learning and Robots
- Computers and Society
- Automation
- Future of Computing
- Social Media
- Software Engineering
- Ethics/Web/Internet
- History of Computing

- The public of any country (or all)
- CEO (or an executive) of a certain company
- Vice Chancellor of a University
- Member of Parliament (or the parliament)
- Government Regulator (e.g. OFCOM)
- Editor of a journal, magazine, tabloid
- Data Manager at a company or institution
- Human Resource team/manager
- Students (schools or under/post-graduate)
- A community (e.g. LGBTQ+)
- Sport person (a team, a coach, an athlete)
- Users of something (e.g. drivers of a car)
- Staff (Academic, NHS ...etc)
- Influencers

AI Development technologies  
use of AI industry effects  
AI and Robotics AI Art  
Computers society changing job  
Artificial Intelligence social media Impact of ai  
Computer Science extent of AI

# Topic Examples

# Guess the artist?



# DALLE.E



DALL·E 2

# Questions that you are seeking answer for

## **1. How does DALL·E generate creative and novel images from text prompts?**

- Investigate the underlying mechanisms and algorithms used by DALL·E to create images based on textual input.

## **2. What are the practical applications of DALL·E in various fields?**

- Explore how DALL·E can be applied in areas like art, design, advertising, or education.

## **3. What ethical concerns are associated with AI models like DALL·E?**

- Examine the ethical implications of generating content with potential biases or harmful outcomes.

# Audience

## **1. Academic Community:**

- researchers and academics in the field of AI and NLP

## **2. Creative Professionals:**

- artists, designers, or creative professionals

## **3. Ethics and Policy Experts:**

- experts in ethics, AI policy, and regulation to address ethical concerns associated with DALL·E

## **4. General Public:**

- raise awareness about AI and its impact...etc

# How to approach audience

- You don't have to approach the audience in real world.
  - so if your audience is the Prime Minister, you don't have to go down to 10 Downing Street.
- When presenting your work you would assume your class-mates to be the audience you are targeting.
- The audience (you), will ask questions and debate points
- When writing your report, you need to keep your target audience in mind

amazon

Google

Microsoft



SAMSUNG



 amazon alexa

 Google  
ASSISTANT

 Cortana

 Siri

 Bixby

amazon

Google

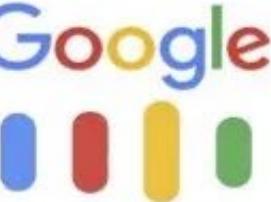
Microsoft



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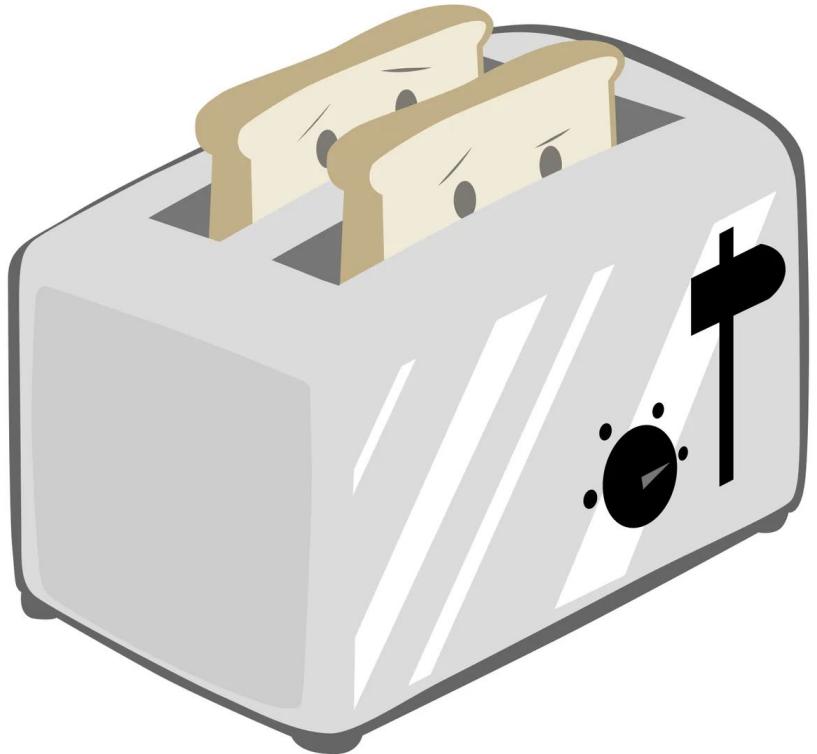
 amazon alexa

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ASSISTANT

 Cortana

 Siri

 Bixby



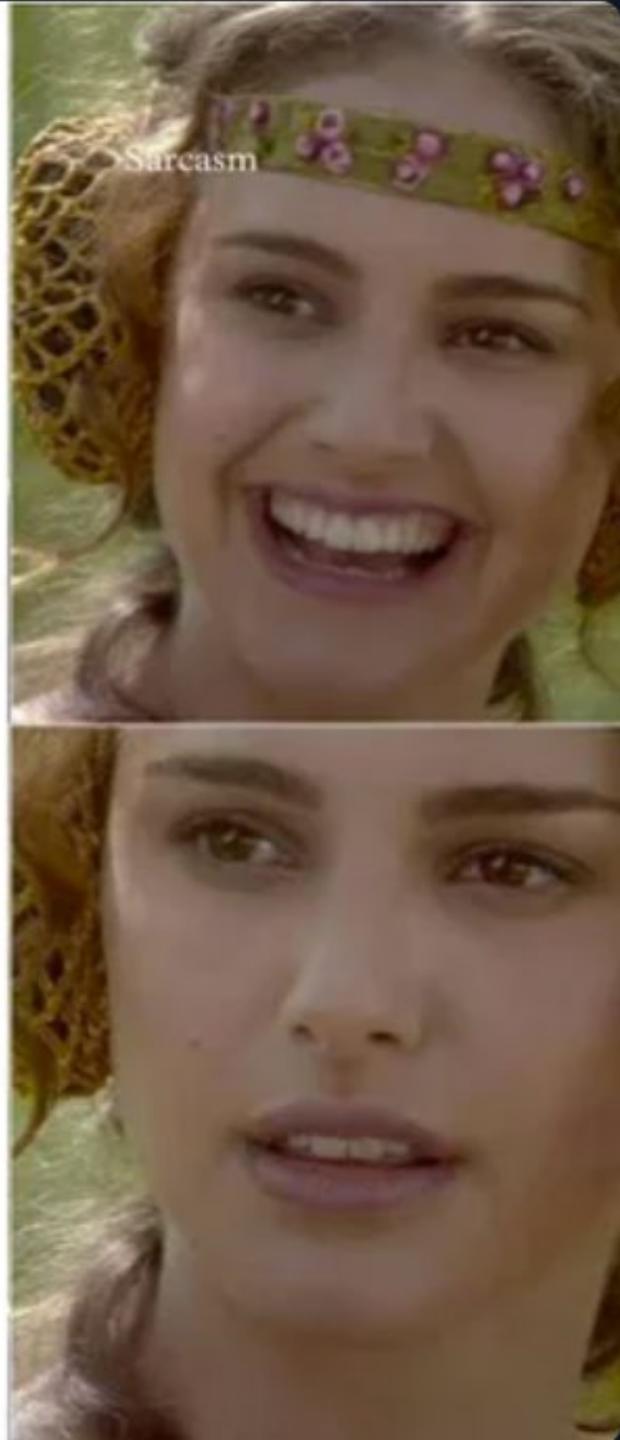
Could your toaster  
be spying on you?

What languages does your toaster speak?

Will ChatGPT  
take my job?

**When I  
realise ChatGPT  
can do my job**

**When I  
realise ChatGPT  
can do my job**





# scc.360

## Computer Science Seminars

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# Aims of SCC.360

- Acquire and use knowledge to communicate with an audience
- Present information effectively to a range of audiences
- SCC.360 will help you to meta-learn:
  - Digest information from CS-related sources on topics in which you may or may not be expert
  - Filter information sources and extract the gist of the matter
  - Convey information in writing with insight, clarity and economy
  - Present information quickly and effectively to audiences with varying (but known) degrees of expertise

# Intended Learning Outcomes

**On completion, students will be able to:**

- Research a complex technical topic related to their studies,
- Including analysing, structuring, summarising, documenting and presenting their findings in front of a large group.
- Produce a coherent document describing their research findings on a complex technical or research topic, present technically intricate issues in a coherent manner and discuss and defend their position on a specific topic within a seminar group.

# Approach in 5 Steps

## 1. Topic Selection

- Choose a topic and a target audience

## 2. Initial Scoping Study

- Study the target area of knowledge and scope out content

## 3. Draft Report

- Set out a structure of the report and content

## 4. Presentation (CW1) [30%]

- Verbally present your understanding to a target audience

## 5. Final Report (CW2) [70%]

- Generate a written report for the target audience

# Why are you here?

## Reasons to take SCC.360

- I want to follow my own interests
- I want to see how to communicate computer science to non-computer scientists
- I want to avoid exams.
- I want to take part in the class (flipped classroom)

## Fallacies in taking SCC360

- Two presentations and an essay?? Easy!!
- It won't take any of my time.

# Flipped Classroom?

- Blended learning
- Increase student engagement and learning
- You will work on problem-solving live in class
- Discuss and give feedback with/to your peers
- Learn how to be critical and skill in asking questions

# Course Delivery: Where?

## Lectures:

every other Tuesday 13-14 at FAR – Frankland LT (weeks 11, 13, 15, 17, 19)

## Workshops:

### Workshop W01/02:

- Tuesday 14-16 (check calendar as this workshop is in various rooms)

### Workshop W01/03

- Thursday 14-16 (BLN - Bowland Nth SR 20 - weeks 11-15, 17)
- Thursday 13-15 (BLN - Bowland Nth SR 02 - week 16 only)
- Thursday 14-16 (BLN - WEL - Welcome Centre LT4 A22 - weeks 18-20)

### Workshop W01/01

- Thursday 16-18 (BLN - Bowland Nth SR 02)
- Stick to your workshop, seats are limited

# Assessment Components

- NO EXAM!

## Formative:

- Topic selection and Scoping Study
  - Lightning presentations. Get as much feedback as you can (not assessed)
- Report Draft
  - 1-5 pages: outline/draft, discuss your draft with your peers and teaching staff (not assessed)

## Assessed:

- CW1 (30%) - Final Presentation
  - In person presentation, PowerPoint slides by Friday Week 17 (1 March). [panel like marking]
- CW2 (70%) - Final Report
  - 5 pages text + references submit by Monday Week 20 (18 March). [feedback is given throughout the module]

# Extensions

Extension requests should be sent to Teaching Office not me!

Only requests with merit will be approved

- “Dog ate my homework” doesn’t cut it
- Ask for help well in advance
- Extension requests on deadline day are not likely to be granted
- Exceptional circumstances are treated differently

# Course Delivery

- Lectures
  - (1-hour every other week)
- Workshops
  - (2-hour workshops a week, please attend your designated workshop)

# Course Delivery (Week 11)

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- Week 11
- Topic Selection.
- Introductory discussion on main activities:
  - Reading, scoping, drafting, presenting and writing
- <https://forms.office.com/e/2KMhDKma8Q>
- Deadline for topic selection is 4pm on Friday Week 11
- Otherwise I'll allocate you to a random topic.



# Course Delivery (Week 12)

- **Week 12:** Reading and Scoping activities
- Research your topic
- Generate a “scoping study and selection of sources”
- Prepare a PowerPoint presentation – 2 minutes lightning talks
- Present your work to your group and assigned teaching staff.
- Informal discussion, no marks will be given and of course no judgements ☺

# Course Delivery (Week 13)

- Week 13: Scoping discussion
- Continue presentations or if you have presented already and updated your slides, present again to help polish your slides for the final presentation.
- Feedback: verbal feedback by the group peers and group teaching staff.

# Course Delivery (Week 14)

- Week 14: Draft/Outline report
- Prepare or start working on a 1-5 draft report to discuss with your peers and group teaching staff.
- Use the workshop to ask questions.
- Discuss ideas with us or your peers
- You'll get verbal feedback during the workshop in group discussion style.
- Get as much feedback as you can.

# Course Delivery (Week 15-16)

- Weeks 15 and 16: Draft/Outline report
- Continue to discuss your draft with your group and tutor.
- Keep updating your report as you find appropriate.
- Be critical, feel free to disagree with your peers and tutor.
- Feel free to argue against someone else's opinion in a friendly and scientific environment, use evidence to answer.
- E.g. Argument: "The economic impact of cyber-attacks is not significantly high!". Counter argument: "Just in 2004, cyber attacks economic damage exceeded US-\$250 billion." *Cashell et al. 2004*
- Feel free to make up questions related to your group topics and discuss them with your peers

# Course Delivery (Week 17)

- **Week 17:** attending workshops on this week is optional.
- **SUBMISSION ALERT:** You must submit your PowerPoint presentation by Friday 4pm on Week 17.
  - The workshops will run as normal with TAs available for discussions on and questions.
  - You can use the time to work on your presentation/final report and ask us questions.
  - You can also use this week to get more feedback on your draft report.
- Remember your presentation is mainly based on your final report so working on the two coursework simultaneously is encouraged.

# Course Delivery (Week 18)

- **Weeks 18, 19 and 20:** Final Presentation
- Present your **submitted** slides in your assigned workshop
- In person presentation only.
- Follow-up discussion (whole workshop, coordinated by lecturer)
- Each student gets 4 minutes + 1 for questions (less is fine).
- You will present at your designated workshop on either wk18, 19 or 20.
- Do not wait until week 20 as there isn't enough time for everyone in one week.
- Attend your entire workshop so you can participate in asking questions as well.
- Marks will be given by the Lecturer (me) and the teaching staff (TAs), and the average will be your final mark.
- Presentations mark is out of 30%.

# Course Delivery (contd...)

- **Week 20:** Final Report
- **SUBMISSION ALERT:** Final Report (5 pages) by 16:00 on **Monday**  
Week 20 (18th of March 2024)
- Finish and submit the report before 4pm on Monday, but it is safer to try and finish your report much before that.

# If in doubt...

- ASK! Questions are free... But need to be timely
- (12 minutes before a deadline is not a good time)
- Communicate with us...
- We are open to listening to your suggestions and questions...
- We are in a better position to address issues if they come directly from you
- Doesn't mean you can't bring them up to others if not addressed
- Extensions requests should go to Teaching Office not me.

# Managing Deadlines

- Deadlines should already be signposted into your calendars
- Keep track of deadlines from other modules
- This is mainly to deal with clashes
- We WON'T move our deadlines from under you
- But be ready for heavy workload weeks
- Plan ahead
- Most assignments have just the right amount of time built in
- You will encounter unplanned events (e.g. job interviews)

# Avoiding Plagiarism

- Moodle submissions are automatically checked for plagiarism by TurnitIn
  - Quoting of text from other sources without attribution is plagiarism
  - Over-quoting text (with attribution) will attract its own penalties
  - Copying someone's code is also plagiarism
  - Working together and producing similar assignments can lead to plagiarism
  - Copying your own work from a different assignment/module counts as academic malpractice
  - Don't get caught plagiarising, the penalties can be harsh
  - The system is automated and smarter than you think
- 
- More resources:
  - <https://www.lancaster.ac.uk/academic-standards-and-quality/regulations-policies-and-committees/principles-policies-and-guidelines/plagiarism-framework/>



# Generative AI and academic integrity

Passing off someone else's work as your own, including:

- Using AI tools to help with research, generating ideas for or planning your assessed work may be appropriate but you must never include content provided by an AI tool representing it as your own work.
- You should also be aware that AI tools create content by drawing on material created by others without referencing it.
- **Representing AI generated content as your own and failing to reference it appropriately counts as plagiarism** and is addressed as described in the University's Plagiarism Framework and Manual of Academic Regulations and Procedures (MARP) .

# SpLD

- Have you declared any SpLD to the University?
- Your lecturers may not be aware of it.. for many convoluted reasons
- Know the process
- If in doubt, ask the Teaching office, Academic Tutor etc.
- Help us to be of assistance
- Speak to us to explore options like
  - Alternative arrangements of assessment
  - Additional support as required
  - Diversity Considerations

# Topic Selection Process

- Due **Friday Week 11 16:00**
- 10 main topics to choose from (1 only and cannot be changed)
- Make your own Report Title
- Choose your audience Select a target audience for your topic – or make one up (up to 2)
- You do this by filling a Microsoft Form. You have to be logged in using your University email (can only submit once)
- Print/download a copy of your answers
- <https://forms.office.com/e/2KMhDKma8Q>



# Groups

- You will be allocated to a group based on your main topic (e.g. Cybersecurity)
- Each group is made of a maximum of **5 members**.
- You can have your own group, you need:
  - to have the same main topic
  - to be in the same exact workshop
  - to choose a leader and add their ID in the form (if you are the leader add in your own ID).
  - Otherwise I'll randomly allocate you to a group based on your topic.
- Marks are individual, the group is to have in class discussions, brainstorming, lightning talks ...etc

# Example



<https://forms.office.com/e/2KMhDKma8Q>

## SCC.360 Topic and Audience Selection

Use this form to select a topic and an audience.

Hi, Mo. When you submit this form, the owner will see your name and email address.

\* Required

1. Choose a topic (only 1 topic, CANNOT be changed later, so choose wisely) \*

- Natural Language Processing
- Cybersecurity
- AI, Machine Learning and Robots
- Computers and Society
- Automation
- Future of Computing
- Social Media
- Software Engineering
- Ethics/Web/Internet
- History of Computing

2. Report Title (can be changed later but must continue be related to the topic you chose in 1). \*

Can fake news impact the stock market

3. Choose an audience - up to 2, or make up one! You can change audience later on. \*

Please select at most 2 options.

- The public of any country (or all)
- CEO (or an executive) of a certain organisation
- Vice Chancellor of a University
- Member of Parliament (or the prime minister, president, emperor, king or queen. ...etc of a certain country) (or all)
- Government Regulator (e.g. OFCOM)

# Some examples...

Topic	Audience
The impact of fake news on social media	Influencers
Are Computer Games Harming or Helping?	SONY Computer Entertainment
How does social media influence political campaigns?	Parliamentary committee
The impact of Natural Language Processing on helping endangered languages	Minister of Official Languages
Ensuring ethical behaviour on the web	Facebook board meeting
Did AI and the digital revolution affect the music industry?	music historians
Can we trust the automation industry?	product manager

Example of previous submissions (on Moodle):

<https://modules.lancaster.ac.uk/mod/folder/view.php?id=2307249>

# Summary and Questions

- Approach – ‘the flipped classroom’
- Choice of topic and audience **Friday Week 11 16:00**
- Assessments:
  - Formative (No marks):**
    - Topic selection and Scoping Study
    - Report Draft
  - Assessed (out of 100%):**
    1. CW1 (30%) - Final Presentation (Friday week 17)
    2. CW2 (70%) - Final Report (**Monday** Week 20)
- To Do:
  - This week - choosing a topic and an audience
  - Next week – scoping study



[https://forms.office.com/e/2  
KMhDKma8Q](https://forms.office.com/e/2KMhDKma8Q)