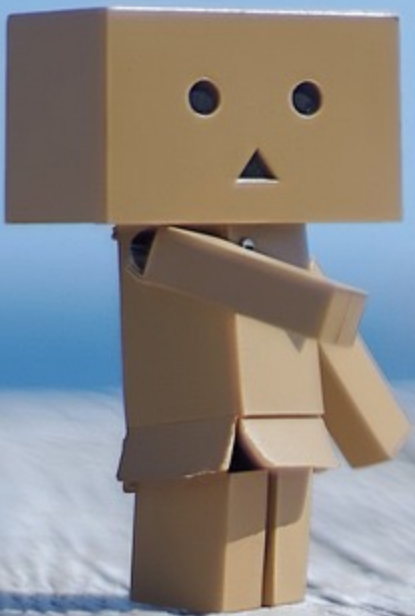


Seminar in Cognitive Modelling (24-25)

Welcome!

Today: Intro/Logistics + What is Cognitive Science



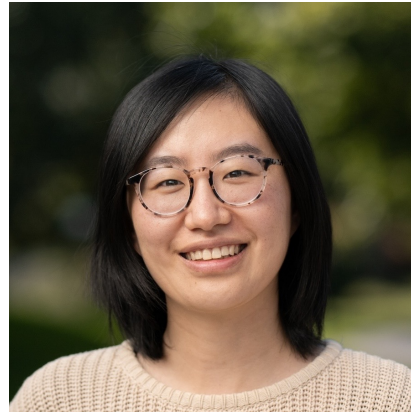
Quick introduction

- Maithilee Kunda (pronounced like “mightily” but with a “th”)
 - You can call me Maithilee or Dr. Kunda
- Undergrad at MIT – Mathematics with Computer Science
 - this is when I got into AI!
- PhD at Georgia Tech – Computer Science
 - computational cognitive model was a big part of my dissertation
- Postdoc – computer vision (2013-2015, an interesting time!)
- Assistant/associate professor at Vanderbilt University for 8 years
- Just came to Edinburgh Informatics this past January!
- More about my research on Thursday....

Course Staff



Lecturer, semester 1:
Maithilee Kunda



Lecturer, semester 2:
Bonan Zhao

TAs



Syd de Souza



Max Taylor-Davies

Learning Outcomes

1. Demonstrate understanding of a range of classic and current articles in cognitive science / modelling by summarizing and critiquing their central ideas and/or results
2. Demonstrate understanding of the relationship between computational models and cognitive theories, by being able to critically assess the theoretical adequacy of a given model
3. Compare and contrast the strengths and weaknesses of different models of the same behaviour
4. Search the literature and synthesize information from several papers on the same topic and create a coherent oral presentation on that topic
5. Communicate (written and oral) key findings in cognitive science/modelling to inter-disciplinary audiences

Learning Outcomes – Translation!

1. Learn a bunch about cognitive science and cognitive modelling
2. Improve HOW you read cognitive modelling papers (and scientific papers in general) – especially understanding relationships between “theory” and “models” and “experiments”
3. Improve your written and oral communication skills – through LOTS of practice!
4. Have fun? (Yes!) Get to know each other, enjoy the discussions!

Required background

- This course is open to students from many different backgrounds.
- Assumes some knowledge of cognitive science
- And, by the second semester, knowledge of linear algebra, probability theory, statistics, and model evaluation.
- Data visualization and programming experience will be useful but there is no required programming.

Logistics

- Course meets every Tue/Thu, 10-11:50 am
- Locations are a little bit chaotic! More on this later...
- You will be divided into two groups, 16 students each
 - Sharks and dolphins!
- This is to facilitate seminar-style discussions
- Alternate days for (1) presentations, and (2) discussion activities
- Do people have class conflicts?

Semester 1

- Introductory lectures and discussions (6 classes)
- Thereafter: alternating presentation days and discussion days
- Readings – assigned, one paper (or 2-3 smaller papers) before each class (starting next week!)
- Portfolio
 - Written responses to papers, in class (every class period)
 - Written responses to group discussion activities, in class (on discussion days)
- Presentation – on an assigned paper (graded, but does not “count”)
- Essay – will get assigned ~1 month in. Then pick topic and start working on the essay

Semester 2

- Introductory lectures and discussions (2-4 classes)
- Thereafter: alternating presentation days and discussion days
- Readings – assigned, one paper (or 2-3 smaller papers) before each class
- Portfolio
 - Written responses to papers, in class (every class period)
 - Written responses to group discussion activities, in class (on discussion days)
- Presentation – on a paper of your choice (counts towards course grade)
- Essay – due on January 31

Assessment

- Portfolios, Semester 1 – 15%
- Portfolios, Semester 2 – 15%
- 20 per semester
 - can have up to 5 missing per semester, no questions asked
 - This should cover absences, etc.
- Essay, Semesters 1&2 – 40%
- Presentation, Semester 2 – 30%

What is cognitive science....

What is cognitive science....



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<https://cognitivesciencesociety.org/>

seven major disciplines!