SEMTM0011 "Cognitive Artificial Intelligence" Assessment Report – TB1 2024/25

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Overview

Please provide a short (ca. 150 word) summary of your reflection on students' performance in the assessment(s) for this unit. To what extent did students demonstrate they met the learning outcomes and the skills referenced in the generic marking criteria? Where did students succeed and where did they lose marks?

Overall, the students showed an impressive breadth of knowledge and understanding across neuroscience, psychology and AI. They were able to critically assess and compare AI models in terms of their similarities and differences with the brain. In the coursework the students demonstrated impressive abilities to design brain-inspired artificial neural networks. The large majority of students demonstrated beyond doubt that they met the intended learning outcomes and skills.

Excellent answers in the exam and coursework showed deeper treatment of the original research literature, original ideas and critical analyses, and more extensive analyses of the brain-inspired artificial neural networks.

Just one thing…

What one change would have made the greatest positive impact to students' marks? What one piece of advice would you give to this year's students towards their further work and/or to next year's students covering similar material?

The one change that would have the greatest positive impact on many students' marks would be to read deeper and more broadly in the literature. This can happen most easily if starting early in the unit. This is helpful to broaden your ideas, sharpen your critical eye and your arguments.

Overall distribution of marks

Mark Range	Number of students
80-100	0
70-79	14
60-69	12
50-59	3
40-49	3
<40	2

Comments by question / question area or criterion

For each exam/coursework question or appropriate equivalent, please note the learning outcome(s) assessed (with reference to the unit specification), give a measure of student performance (e.g., summary statistics) and some reflection on how students performed. If your assessment has many questions (more than six), or consisted of a single coursework with multiple criteria, please group the questions or use assessment criteria as appropriate.

Question	Learning outcomes assessed	Summary statistics	Reflection
Exam Short Questions	2,3,4	Mean: 63 SD: 16	Students overall did well on the short questions, demonstrating impressive breadth of knowledge. Students receiving very high marks differentiated their answers by precise and complete answers.
Exam Long question (best of 2)	2,3,4	Mean: 71 SD: 26	Students tended to do very well on this section, perhaps aided by a choice of two long questions. Some longer calculations worth high marks allowed led to (near) maximum points for some students, and helped others who did not do quite as well on the questions that required broader knowledge of the material. However some students who did not complete the questions correctly lost a fair chunk of points here.
Exam Essay question	2,3,4	Mean: 62 SD: 10	Some essays stood out. The majority of essays were reasonable. The short format within the exam perhaps made it difficult for students to make their answers stand out. Appropriate citations of relevant literature and original arguments did however help some students' answer stand out.
Coursework Q1	2	Mean: 82 SD: 12	This was a relatively easy question for most students
Coursework Q2	1,3,4	Mean: 61 SD: 13	This was the bulk of the coursework. Exceptionally strong answers stood out due to 1) original or multiple models, 2) extensive analyses, some going beyond those covered in class, 3) novel choices of cognitive tasks to simulate.
Coursework Q3	3	Mean: 58 SD: 9	Most students had satisfactory answers here of a similar standard. Few answers stood out.