BIRMINGHAM CITY
University

Coursework Assignment Brief
Undergraduate

Academic Year 2024-25

Module Title:	Deep Neural Networks	
Module Code:	CMP6228	
Assessment Title:	Deep Learning Project	
Assessment Identifier:	**CWRK002**	Weighting: 80 %
School:	School of Computing and Digital Technology	
Module Co-ordinator:	Dr. Khalid Ismail	
Hand in deadline date:	**CWRK002: 3 pm 16th May 2025**	
Return of Feedback date and format	20 working days from date of submission (see Moodle for details).	
Re-assessment hand in deadline date:	3 pm 28th July 2025	
Support available for students required to submit a re-assessment:	Students must mutually arrange support sessions with the module coordinator/tutor(s).	
NOTE:	At the first assessment attempt, the full range of marks is available. At the re-assessment attempt, the mark is capped and the maximum mark that can be achieved is 40%.	
Assessment Summary	**Assessment 2 – Final Report** (weighting **80%**) Student will: a) build and implement a model to solve the proposed challenging problem of **Assessment 1**; b) evaluate the performance of the proposed model; and c) prepare a final report to demonstrate the results.	

IMPORTANT STATEMENTS

Standard Postgraduate Regulations

Your studies will be governed by the BCU Academic Regulations on Assessment, Progression and, Awards. Copies of regulations can be found at   https://icity.bcu.ac.uk/Academic-Services/Information-for-Students/Academic-Regulations-2018-19

For courses accredited by professional bodies such as the IET (Institution of Engineering and Technology), there are some exemptions from the standard regulations and these are detailed in your Programme Handbook

Cheating and Plagiarism

Both cheating and plagiarism are unacceptable and the University maintains a strict policy against them. It is YOUR responsibility to be aware of this policy and to act accordingly. Please refer to the Academic Registry Guidance at https://icity.bcu.ac.uk/Academic-Registry/Information-for-Students/Assessment/Avoiding-Allegations-of-Cheating

The basic principles are:
- Don't pass off anyone else's work as your own, including work from "essay banks". This is plagiarism and is viewed extremely seriously by the University.
- Don't submit a piece of work in whole or in part that has already been submitted for assessment elsewhere. This is called duplication and, like plagiarism, is viewed extremely seriously by the University.
- Always acknowledge all of the sources that you have used in your coursework assignment or project.
- If you are using the exact words of another person, always put them in quotation marks.
- Check that you know whether the coursework is to be produced individually or whether you can work with others.
- If you are doing group work, be sure about what you are supposed to do on your own.
- Never makeup or falsify data to prove your point.
- Never allow others to copy your work.
- Never lend disks, memory sticks or copies of your coursework to any other student in the University; this may lead you to being accused of collusion.

By submitting coursework, either physically or electronically, you are confirming that it is your own work (or, in the case of a group submission, that it is the result of joint work undertaken by members of the group that you represent) and that you have read and understood the University's guidance on plagiarism and cheating.

You should be aware that coursework may be submitted to an electronic detection system to help ascertain if any plagiarised material is present. You may check your own work prior to submission using Turnitin at the Formative Moodle Site. If you have queries about what constitutes plagiarism, please speak to your module tutor or the Centre for Academic Success.

Electronic Submission of Work

It is your responsibility to ensure that work submitted in electronic format can be opened on a faculty computer and to check that any electronic submissions have been successfully uploaded. If it cannot be opened it will not be marked. Any required file formats will be specified in the assignment brief and failure to comply with these submission requirements will result in work not

being marked. You must retain a copy of all electronic work you have submitted and re-submit if requested.

Learning Outcomes to be Assessed:

1. Evaluate different deep learning techniques for suitability to a given knowledge discovery problem.
2. Validate deep learning methods using modern deep leaning tools.
3. Professionally report deep learning results providing clear solutions to the identified knowledge discovery problems.
4. Critically appraise recent trends in deep learning literature and industry relevant to your work.

 Assessment Details:

Title: Assessment 2 – Final Report
Type: Coursework
Style: Python code + Report

Rationale: This assignment aims to check students' ability to build, implement, and evaluate an appropriate model to solve the proposed problem of **Assessment 1**. It also aims to check their ability to communicate and discuss the results. **(assessment weighting is 80%).**

Description: The students must complete the following activities:

- Students must demonstrate their ability to implement and validate an appropriate model to solve the proposed problem.
- Students should employ theoretical concepts to build an appropriate model and solve the proposed problem in a systematic way.
- Students must demonstrate their ability in evaluating the performance of the proposed model.
- Students must demonstrate their ability to professionally communicate the results.
- Students should show their developing work for Assessment 2 to module tutors during lecture sessions and submit a draft version of Assessment 2 (Moodle submission by **week 11.** By this deadline, students must also consult the module tutors on how to receive feedback on their draft work. To quickly resolve such issues, students **must consult their module tutors during the lecture sessions**.

Each student will submit **Assessment 2** as a written report as detailed in Additional Information below.

Additional information:
- Each student will submit **Assessment 2** as a written report. (Moodle submission by the given deadline). For completion, the report for Assessment 2 must also include the Python code used to build the model and associated evaluation plots. The report must include:
  - Title of the report.
  - Name and Student ID.

- o Abstract: what are the main findings of the report?
- o Section 1: Introduction. This section should summarise and highlight the aim of the report, a brief description of the selected dataset and the achievements of the report, and finally describe how the report is organised.
- o Section 2: Problem statement. Provide a detailed description of the dataset and the deep learning problem.
- o Section 3: Proposed method. Provide a full description of the proposed methodology including the pre-processing phase.
- o Section 4: Experimental Results. Provide a detailed description of the parameter settings, evaluation process, and obtained results.
- o Section 5: Summary. Discuss and highlight the main findings in this report.
- o References (as per Harvard Referencing Style: https://icity.bcu.ac.uk/Library-and-Learning-Resources/Referencing/harvard-referencing).
- Students must produce their reports using LaTeX.

For advice on writing style, referencing and academic skills, please make use of the Centre for Academic Success: https://icity.bcu.ac.uk/celt/centre-for-academic-success

Workload: Assessment 2 will have a maximum word count of 3000 excluding figures and references.

A typical student will spend up to 70 hours of study to pass this assessment.

Transferrable skills:

- Problem solving
- Programming skills
- Analytical skills
- Time management
- Project management
- Written communication skills

Marking Criteria:

Table of Assessment Criteria and Associated Grading Criteria

Task	Assessment 2		
Assessment Criteria ➔	**2. Validate deep learning methods using modern deep leaning tools.**	**3. Professionally report deep learning results providing clear solutions to the identified knowledge discovery problems.**	**4. Critically appraise recent trends in deep learning literature and industry relevant to your work.**
Weighting:	**40%**	**20%**	**20%**
Grading Criteria **0 – 29%** **F**	The validation is missing or inaccurate/wrongly conducted. Wrong techniques have been used. No parameter setting is included. Python code is missing. Model has not been evaluated.	Non-existent experimental details. No findings have been highlighted in the report. A poor organisation of the report makes it very hard to understand. Sentence, paragraph and section structuring is poor.	Little to no rationale is given of the importance of deep learning in relative applications. Little to no information is given for the comparison between the different deep learning approaches and software tools in relative applications.

	30 – 39% **E**	The validation of the method is quite misleading. Misleading techniques have been used. Parameter setting is missed Comments in the Python code are either missing or are irrelevant. Performance evaluation is missed.	Poor existent experimental details. Poor and non-significant findings have been highlighted in the report. Poor grammar and poor academic writing style are used.	The comparison between the different methods is conducted poorly. Sentence, paragraph and section structuring shows little understanding of the work.	
	40 – 49% **D**	Satisfactory validation. Satisfactory techniques have been used. Parameter setting is missed Comments in the Python code are at minimal. Performance evaluation is incomplete.	The report shows satisfactory experimental details. Some findings have been highlighted in the report. Grammar is reasonable but the academic writing style is unacceptable.	The comparison between the different deep learning approaches and software tools in relative applications are conducted but not complete. Sentence, paragraph and section structuring shows a shallow understanding of the story.	

50 – 59% **C**	The validation process is acceptable. Accepted techniques have been used. Parameter setting is provided but not clear Comments in the Python code are not complete. Performance evaluation is not clear.	The report shows acceptable experimental details. All the findings have been highlighted in the report but not clearly delivered. Grammar is acceptable but academic writing style can be noticeably improved.	The comparison between the different deep learning approaches and software tools in relative applications is well conducted but needs improvement. Sentence, paragraph and section structuring provides an understanding of the story but needs improvement.	
60 – 69% **B**	The validation process is missing clarification. Appropriate techniques have been used. Parameter setting is incomplete. Comments in the Python code are provided in most parts. Performance evaluation is clear, but more metrics are needed.	The report shows good experimental details but not in a systematic way. Findings have been clearly highlighted in the report. Grammar is acceptable but academic writing style can be a bit improved.	The comparison between the different deep learning approaches and software tools in relative applications is well conducted but need further attention. Sentence, paragraph and section structuring provides a high-level of understanding but needs further attention.	

70 – 79% **A**	The validation process is complete. Good techniques have been used. Parameter setting is complete but missing clarification. Comments in the Python code are thorough but not concise.	The report shows good experimental details organised systematically. Important findings have been clearly highlighted in the report. Grammar is excellent but the academic writing style is technically sound.	The comparison between the different deep learning approaches and software tools in relative applications is nearly completed. Sentence, paragraph and section structuring provides a clear understanding of the story.	
80 – 89% **A+**	The validation process is complete with clear graphs. Excellent techniques have been used. Parameter setting is complete. Comments in the Python code are concise in all parts.	The report shows excellent experimental details. Findings are significant and accurately highlighted in the report. Grammar and academic writing style are excellent.	The comparison between the different deep learning approaches and software tools is professionally conducted but relative applications have not been fully covered. Sentence, paragraph and section structuring is excellent.	

	90 – 100% A*	The validation process is complete with excellent graphs. Outstanding techniques have been used. Parameter setting is complete with outstanding explanation. Comments in the Python code are excellent and concise in all parts.	The report shows excellent and scientifically-sound experimental details. Findings are appealing and professionally demonstrated in the report. Grammar and academic writing style are appealing.	The comparison between the different deep learning approaches and software tools in relative applications is professionally conducted. Sentence, paragraph and section structuring is appealing.	

Submission Details:

- **Format:** Required software for producing the reports is LaTeX.
- File format for the submissions is **PDF**.

Regulations:

If you submit an assessment late at the first attempt, then you will be subject to one of the following penalties:

- if the submission is made **between 1 and 24 hours** after the published deadline the original mark awarded will be reduced by **5%**. For example, a mark of 60% will be reduced by 3% so that the mark that the student will receive is 57%. ;
- if the submission is made between **24 hours** and **one week (5 working days)** after the published deadline the original mark awarded will be reduced by 10%. For example, a mark of 60% will be reduced by 6% so that the mark the student will receive is 54%.
- **if the submission is made after 5 days following the deadline, your work will be deemed as a fail and returned to you unmarked.**

The reduction in the mark will not be applied in the following two cases:

- the mark is below the pass mark for the assessment. In this case the mark achieved by the student will stand

- where a deduction will reduce the mark from a pass to a fail. In this case the mark awarded will be the threshold (i.e.50%)

Please note:
- **If you submit a re-assessment late then it will be deemed as a fail and returned to you unmarked.**

Feedback:
Feedback for each deliverable will be provided via Moodle. However, for Assessment 1 the students are strongly encouraged to discuss their submission in person with the tutors. The students are also strongly encouraged to discuss their draft work with tutors in lecture sessions, whenever time permits.

Marks and Feedback on your work will normally be provided within 20 working days of its submission deadline.

Where to get help:

Students can seek reasonable feedback (no more than 10 minutes on average each week) outside lecture sessions by contacting the module tutors via email.

Students can get additional support from the library support for searching for information and finding academic sources. See their iCity page for more information: http://libanswers.bcu.ac.uk/

The Centre for Academic Success offers 1:1 advice and feedback on academic writing, referencing, study skills and maths/statistics/computing. See their iCity page for more information: https://icity.bcu.ac.uk/celt/centre-for-academic-success

Link to My Assignment Planner tool: http://library.bcu.ac.uk/MAP2/freecalc-mail/

Fit to Submit:

Are you ready to submit your assignment – review this assignment brief and consider whether you have met the criteria. Use any checklists provided to ensure that you have done everything needed.

The lists of sections for each deliverable is provided in "Assessment Details" earlier in this document. Those lists of sections constitute the checklists.

Check List:	Completed? (tick the item).
Did you follow all the steps outlined in the section titled 'Assessment Details'?	
Did you Include all the sections as outlined in 'Assessment Details'?	
Did you use Harvard Referencing?	
Did you follow the conventions of academic writing?	
Is the file to be submitted in the PDF format?	