Lincoln School of Computer Science

Assessment Item Briefing Document

Title: CMP9782M Frontiers of Machine Learning and Computer Vision Research – Research Project Proposal and Literature Review	Indicative Weighting: 100%

Learning Outcomes:

On successful completion of this assessment item a student will have demonstrated competence in the following areas:

[LO1] Critically appraise the "state of the art" in computer science research, including an understanding of the theoretical developments and current applications in computer science research topics.

[LO2] Produce a research proposal for a substantial research project in one of the computer science research topics.

Requirements

The summative assessment for this unit consists of two pieces of work: a research project proposal, presented in the form of a poster, and a research literature review, presented in the form of a report. You are also required to present your poster in person at a special poster session, which will be discussed in further detail during the lectures.

1. **Research Proposal (poster)**

The research proposal should be discussed in detail with your project supervisors, and presented in the form of a poster using the template provided. The suggested structure for the proposal is as follows:

Title

The proposal should have a concise, descriptive title reflecting the research problem investigated and highlighting any unique aspects of the work.

Abstract

The proposal should include a concise summary of your intended research of no more than 100 words.

Introduction

The proposal should provide a brief introduction, giving the background and introducing the research problem and motivation for research in this area.

Aims and Objectives

The proposal should give a description of both the high-level aims, identifying the project's overall purpose, and a detailed set of objectives, representing the major components of the project that will direct your research activities.

Research Methods

The proposal should outline your intended research methods, explaining how you are going to conduct and evaluate your research. For example, if you plan to investigate learning of vision-guided machine behaviours, you could outline the component techniques from machine learning, computer vision and control that will be investigated, together with your proposed approach for integrating these techniques and evaluating the developed system.

Research Plan

The proposal should sketch the key tasks, milestones and deliverables of the project, together with an indication of the timescales involved, for example, in the form of a Gantt chart.

2. **Research Literature Review (report)**

You are also required to submit an in-depth review of previous academic work relating to the research problem under investigation. You should write your review in the form of a **4-page report** using the IEEE conference paper format (https://www.overleaf.com/latex/templates/preparation-of-papers-for-ieee-sponsored-conferences-and-symposia/zfnqfzzzxghk) with a maximum of 4 pages excluding references. References must be presented in the correct IEEE format. Appendices or additional pages are not allowed. The report should be written *in your own words*, summarising and analysing the research background for your project, including discussion of the alternative research methods considered within the research proposal. You should also discuss the selection of papers and articles to include in the literature review with your project supervisors.

Useful Information

This assessment is an individually assessed component. Your work must be presented according to the Lincoln School of Computer Science guidelines for the presentation of assessed written work.
Please make sure you have a clear understanding of the grading principles for this component as detailed in the accompanying Criterion Reference Grid.
If you are unsure about any aspect of this assessment component, please seek the advice of a member of the delivery team.

Submission Instructions

The deadline for submission of this work is included in the School Submission dates on Blackboard.

The deadline for submission of this work is included in the School Submission dates on Blackboard. Submission will be made by electronic means. The electronic submission will be to Blackboard as a pair of PDF files: one PDF file for your poster, and one PDF file for your literature review (no other format will be accepted).

Each student is also required to present their poster to a selected audience including the module delivery team at a special poster session, as per the schedule indicated on Blackboard. You must attend the lectures for further details, guidance and clarifications regarding these instructions.

DO NOT include this briefing document with your submission.