COMPSCI 289

Assignment 3: Group Research Report

Worth 60% of your final grade
(30% for the group aspect, 30% for the individual aspect)
This assignment is due by 5:00pm on Friday 23 October 2020
This is a group assignment

Aims

The aim of this assignment is to give you experience in researching an area of Computer Science with a classmate and producing a report summarising the current research frontier.

Objectives

- Investigate a Computer Science area in depth
- Make a critical evaluation of four (4) research papers (2 per group member)
- Identify and summarise strengths and weaknesses of advances in a particular area of Computer Science
- Write a conference quality technical report of a Computer Science area
- Develop and practice group work skills in a group of two (2)

Background

This is an opportunity to gain a deep understanding of what research is being undertaken in an area of Computer Science which interests your group of two (2). You will identify four (4) important and topical research papers to summarise for the major research area. Your report on the area can be supported by up to ten (10) further research papers which provide a background description of work in the selected area. You will have support from the lecturers and tutors to understand advanced techniques and research concepts that may be presented in the papers.

The research area you choose for this report must be different from what you studied in Assignment 1, but can be seeded by one of the papers in the list provided for Assignment 1. By seeding we mean that you can use one of the listed papers as a starting point to find the four papers you will summarise in the report. The seed paper cannot be one of your four papers. You may, if you wish, choose a research area not represented by the papers in Assignment 1 (but talk with your lecturers about this first). Your four main research papers must be from reputable outlets (as covered in lectures).

Once you have read and understood the research papers you will prepare a technical report for the class, to inform them of the research which is being undertaken in the specific area. A single report will be submitted by the group and it will be between 8-10 pages long, in IEEE conference format.

Deadlines

Date	Deadline
5:00pm, Friday 28 August 2020	Choice of research area and group formation
9:00am, Monday 31 August 2020	Research area agreed by lecturers and any duplicates renegotiated
5:00pm, Friday 23 October 2020	Research area report submitted

Guidelines for the content of your report

The content of your report (8-10 pages including references) includes the following main parts, which should be understandable by the course cohort (your classmates).While both group partners will write parts of the report if should not read like two separate documents glued together. You should review and edit all content to ensure it reads as a seamless report when submitted.

Title and Authors

- A suitable title for the research area.
- Authors in alphabetical order by surname.

Abstract

- 150 word maximum providing a summary of the content of the paper so a reader can ascertain if it is pertinent to them.

Introduction

- What is your topic?
- Where does it fit in the Computer Science discipline?
- What drives the development of the topic (or what are industry's needs), what is its background?
- What distinguishes the topic from associated topics?

Review and discussion of your four (4) papers

- Two (2) papers are to be written up by each group member
- Put you initials at the end of the sub-section title for each of the papers you review
- Which objective is addressed by the research presented in the paper?
- What have researchers previously done towards this goal?
- Describe the research presented in the paper
- Discuss pros and cons of this work
- What future steps have to be taken to fully meet the original objective?

Discussion

- Draw together the commonalities and issues raised across the papers. What can you deduce from the research described? What would you hypothesise as to the direction and progress of work in this topic?

Conclusions

- Summarize major conclusions drawn from the papers and your analysis of the research being undertaken. Do not provide a summary of the individual papers.

References

- List references numbered in the order they are introduced in the report (the template supports this), use the IEEE format for your references.

Notes

We expect this assignment to be presented to a high standard. You must use consistent formatting, good grammar and spelling, and a professional written style. You must use the IEEE conference paper format for your report and the IEEE reference style, see the specification and template below:
https://www.ieee.org/content/dam/ieee-org/ieee/web/org/conferences/conference-template-a4.docx
https://ieeeauthorcenter.ieee.org/wp-content/uploads/IEEE-Reference-Guide.pdf

Submit

An electronic copy of your report as a PDF to Canvas by 5:00pm on Friday 23 October. Please name your report using both of your UPIs (e.g., ramo001-jwar001.pdf).

Questions

Direct questions about this assignment to the class Piazza discussion for Assignment 3 (accessible via Canvas).

Assignment 3 Rubric

Criteria for individual component (30%)

- Comprehension: Understood the concepts in the two research papers and where it sits in computer science
- Analysis: Identified the pros and cons of the research work and what future work is required
- Presentation approach: Well written report providing insight into the two research papers
- Presentation quality: Well-written, clear and readable report

Criteria for group component (30%)

- Presentation approach: Well written report with a discussion drawing together commonalities across the papers
- Synthesis: Provides insight into the research papers with a discussion drawing together commonalities across the papers
- Presentation quality: Well-written, clear and readable report