CHIANG MAI UNIVERSITY

SE776 Information Retrieval Technology

CTDS792 Selected Topics in Application of Data Sciences 2

Term project

1) Preface

- Your task is to select a full research paper (8 pages and above if in two columns format) or a journal article that is likely to be relevant to your thesis and is part of the information retrieval field. Then, replicate the experiment and evaluation. Identify potential improvements and provide your enhanced version.

2) Setup

- Individual project work
- You will make an onsite presentation and demonstration for evaluation.
- Assigned date: February 19th, 2024.
- Materials submission due: March 17th, 2024 (approximately 4 weeks duration)
- (Tentative) Demonstration date: March 18th, 2024, between 13.00 to 14.00

3) Scoring rubrics (of 20 points)

Item	To earn 1 point	To earn 2 points
Introduction	Explain the content and significance of the paper.	Describe how the paper relates to your thesis.
Paper presentation	Compose the slides properly and present them with the quality of a proposal presentation, e.g., the experiment setup, results, and implications are still not fully clear.	Compose the slides properly and present them with the quality of a full research presentation, e.g., the experimental setup, results, and implications are clearly explained and not vague.
Data acquisition and representation	Acquire data equivalent to what was used in the paper. ***Note**: If the original paper has supplied the data, you must be able to explain all the essential statistical components of the data.*	In addition to (1), provide evidence that you can preprocess and format the data identically to that in the original paper.
Experimental rig	-	Provide evidence that you have replicated the experiment using the same process as in the original paper. ***Note**: If the original paper includes code, you must fully explain all aspects of the implementation, such as data structures, coding techniques, and algorithms.*

Item	To earn 1 point	To earn 2 points
Evaluation process	-	Provide evidence that you have replicated the evaluation process as demonstrated in the original paper. ***Note**: If the original paper includes code, you must fully explain all aspects of the implementation, such as data structures, coding techniques, and algorithms.*
Validation	The paper includes statistical analysis.	In addition to (1), replicate the validation process.
Results	Obtain results and format the presentation (e.g., tables, visualizations) as in the original paper.	Explain the rationale behind the results and how they align with or differ from those presented in the original paper. For example, elaborate whether they are consistent with or deviate from the original findings.
Gap discussion	Provide evidence that Identifies the gaps mentioned in the discussion section of the original paper.	Provide evidence that Identifies gaps discovered through your replication and discuss their significance or severity compared to the original paper.
Your improvement	Implement improvements based on the gaps identified in the original paper.	Implement improvements based on the gaps discovered during your replication.
Evaluation after your improvement	You can verify and validate your improvements.	In addition to (1), demonstrate that they yield statistically more significant results than the original.