CS 412 (Algorithms: Design & Analysis) – Spring 2024

Project Poster, Report, and Viva Rubrics – SJA sections L1 and L2

Project Final Poster Rubrics – Total: 04 points		
4 to > 3.0 pts – Above average	**3 to > 2.0 pts – Average**	**2 to > 0 pts – Below average**
A well-summarized introduction to the problem, algorithms used and their design techniques. Theoretical complexity of the algorithms accurately reported and compared. Reports empirical findings succinctly. Good use of the poster space. A frugal use of the text. Design is aesthetically pleasing.	A wordy introduction to the problem, algorithms used, and their design techniques. Theoretical complexity of the algorithms reported with a few errors in the use of asymptotic notations. Empirical results are reported with a few errors. Poster space is underutilized. Unnecessary content is included in the poster. There is some room for improvement in poster design, including the choice of fonts, font sizes, and colors.	An incorrect or improper introduction to the problem, algorithms used, and their design techniques. Theoretical complexity of the algorithms reported incorrectly. Empirical results missing or reported with many errors. Empirical results are reported with some errors. There is too much text. The poster is not thoughtfully designed or is unpleasant visually.
Project Final Report Rubrics – Total: 05 points		
4 to > 3.0 pts – Above average	**3 to > 2.0 pts – Average**	**2 to > 0 pts – Below average**
The report contains the introduction to the problem, a succinct description of the algorithms that are used, along with their design techniques, and a comparison of asymptotic time complexity. A well-described design of experiments (i.e., the different input sizes used to calculate and compare the time complexities empirically, the programming language chosen, the machine used, and any other hardware constraints). A concluding section summarizing the key takeaways. At least three references are included and cited using the ACM reference format.	The report contains the introduction to the problem, a wordy description of the algorithms that are used with their design techniques, and a comparison of asymptotic time complexity with some mistakes. There is room for improvement in the description of the design of experiments (i.e., the different input sizes used to calculate and compare the time complexities empirically, the programming language chosen, the machine used, and any other hardware constraints). The concluding section misses the key takeaways. There is just one or no references.	The report misses the introduction to the problem, or lacks a description of the algorithms that are used or their design techniques, or lacks a comparison of asymptotic time complexity. There is a vague or no description of the design of experiments (i.e., the different input sizes used to calculate and compare the time complexities empirically, the programming language chosen, the machine used, and any other hardware constraints). The concluding section is missing. There are no references.
Project Viva/Demo Rubrics – Total: 04 points		
4 to > 3.0 pts – Above average	**3 to > 2.0 pts – Average**	**2 to > 0 pts – Below average**
Submission of working implementations (own code or standard code with references) of all algorithms in the same programming language (Python or C++). Submission of code (own or standard implementation) on GitHub and the URL of the repository shared in the Final Report. Group members describe the problem and design techniques eloquently with good time management. Reporting key findings using appropriate plots and visualization techniques. Fair contributions by all members are evident. Members answer questions correctly and concisely in the viva.	Submission of working implementations (own code or standard code with references) of all algorithms in the same programming language (Python or C++). Timely submission of code (own or standard implementation) on GitHub and the URL of the repository shared in the Final Reports. Group members describe the problem and design techniques with some mistakes. There is room for improvement in the use of exploratory plots. Project work distribution is lopsided. Presenters answer questions satisfactorily in the viva.	Submission contains errors or does not attribute external sources. Late submission of code (own or standard implementation) on GitHub and the URL of the repository is not shared. Group members are unable to describe the problem and design techniques in the demo. Improper use or lack of exploratory plots to report empirical findings. Members answer questions unsatisfactorily in the viva.