



TPT 1201 GROUP ASSIGNMENT 1

INSTRUCTIONS TO STUDENTS:

1. The total mark for this assignment is **30%**.
2. The assignment is to be completed in a group of **minimum 3 members** and **maximum 4 members**.
3. Identify **ONE** research domain and find at least **20** research papers related to it. The papers must be recent than year 2017.
4. The output of this assignment is a PDF report. The maximum number of pages is **5**, including the references. All reference and citation must follow APA formatting. Use the LaTeX template given.
5. If plagiarism is detected, the assignment will be granted **0%** for all members of the group.
6. Deadline for submission is on **4/7/2022** at **12pm**. Submission is made via Google Classroom. Timestamp will be logged as proof of submission. Late submission will be deducted marks.
7. Only the project leader should submit one **ZIP** file consisting of one report in PDF and research papers used as references in the report.

QUESTION

You can choose any **ONE** research topic within the different domains of Computer Science field. Examples of topic, including, but not limited to:

- (i) Artificial intelligence for disease outbreak detection
- (ii) Machine learning for patient journey
- (iii) Data mining for retail analytics
- (iv) Cloud-based real-estate management systems
- (v) Cloud-based health account management
- (vi) Designing effective healthcare mobile app
- (vii) Opinion mining using Deep Learning
- (viii) ...etc

Discuss the challenges and techniques used by researchers in the topic you have selected. Your findings must be supported by at least 20 journal papers that are recent than year 2017. You should provide an introduction to the topic you selected, limitations/challenges of current findings, proposed solutions and future work by the researchers, and conclusion.

Include the following 2 tables to help you in your discussion.

Table 1: Challenges and problems solved by researchers

Author	Challenge 1	Challenge 2	Challenge 3	Challenge n
Ali(2018)		x	x	x
Chong & Ting (2019)				x
James et al.(2010)	x			
...

Example of discussion (you do not need to follow):

Table 1 shows the challenges and problems solved by different researchers when dealing with COVID-19. From the table, most of the reports have been centering around vaccine supply and delivery. This can be showed by the number of count where 10 out of 15 papers focused on vaccine supply optimization. The second most challenging work as reported by researchers are predicting the outbreak of an area in next 14 days....

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Table 2: Techniques used by researchers

Author	Technique 1	Technique 2	Technique 3	Technique n
Ali(2018)	x			x
Chong & Ting (2019)			x	
James et al.(2010)	x	x		
...

Example of discussion (you do not need to follow):

Table 2 depicts the information about different data mining techniques used in work related to COVID-19. From the above table, decision-tree has been widely accepted in most of the reported research work. Based on the 15 papers, 10 out of them employed decision-tree. The focus areas are vaccine supply chain optimization and forecasting. More recent work has also reported on using geography particularly geospatial analytics to predict the outbreak....

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