UNIT 3: SEMINAR 2 EXERCISE

Source at least 2 papers in a Computing field of your choice that utilise the two different types of research methods to achieve their goal/research aims. Now answer the following questions (please provide justifications for your answers) and be prepared to discuss them in the session:

* Familiarise yourself with the purpose, problem, objective or research question of each paper. Are they in line with your experience or thoughts on the topic, contributing to the collective body of knowledge in this area?
* Is the research methodology utilised in each paper appropriate for the stated purpose or question?
* In terms of data collection and analysis, is this also appropriate for the stated purpose or question? (We will discuss this further in upcoming units.)
* Does each paper support its claims and conclusions with explicit arguments or evidence?
* How would you enhance the work/paper?

**Answers**

Paper 1: **Pang, B., Lee, L. and Vaithyanathan, S. (2002). Thumbs up? Sentiment classification using machine learning techniques. *arXiv preprint cs/0205070*.**

This paper serves as a major contribution to the field of sentiment analysis. Many sentiment analysis researchers have used this paper as a foundation for their own research

Sentiments are subjective opinions (written words) and as such fall into the category of qualitative data. Since they are not binary data, they cannot be processed using quantitative methods. The machine learning techniques utilised along with statistical principles are appropriate for this research.

Absolutely, data is collected from reliable databases. In this case, the Internet Movie Database (IMDb) Archive which contains movie reviews.

Yes, there is evidence of experiments conducted to achieve the goal of the research, which is to analyse the effectiveness of machine learning algorithms in conducting sentiment analysis.

I could extend this paper by implanting a hybrid approach which is to combined machine learning algorithms and lexicon-based approach to ascertain if a higher sentiment classification can be achieved.

Paper 2: **Waller, M.A. and Fawcett, S.E. (2013). Data science, predictive analytics, and big data: a revolution that will transform supply chain design and management. *Journal of Business Logistics*, *34*(2):77-84.**

This paper seeks to emphasise the need for predictive analytics along with big data technology in developing the supply chain management field. The paper contributes effectively to the body of knowledge

Data collected here is quantitative data showing the increasing number of googles searches of big data in relation to supply chain management. Statistical methods have also been used to show the data over a period. This is to prove the growing relevance of big data and data science to the SCM field. The research method used here is appropriate for the data collected.

Data collection and analysis is appropriate, but more data can be collected.

Yes, there is evidence of tests done. Statistical charts and graphs are shown comparing growth of variables over time.

I could extend this research by sourcing for additional data beyond google searches used. I believe this will give more credibility to the research work.