**Title (10 words)**



Master of Science (MS) in Data Science  
Module: ITC6009A1 – Machine Vision in Data Science  
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# **Abstract**

Approximately 200 words

# *Keywords:*

Approximately 5 words

# **Introduction**

# 

# **Literature Review**

Approximately 700 words

Info:

State issue at hand, describe problem.

• Literature review/background survey = summarise work already done in this area (you may want to include details for very relevant work or methods). This is commonly written first (or at least during the early stages), as you will benefit from knowing what has been done and which methods have been applied.

• Using these, provide a description of what you did and why. This statement is commonly left to the end, as only then will you have a complete view.

The internet contains vast amounts of semantically isolated data that users can access and understand independently. The creator of the Word-Wide Web, Tim Berners-Lee introduced the Semantic Web, an evolutionary idea that all the available information could not only be connected, but also understood by the Web (Berners-Lee,T., et al., 2001). Berners-Lee in his work emphasized the development of technical concepts like Uniform Resource Identifiers (URI), Resource Description Framework (RDF) and Web Ontology Language (OWL). Recently, the concept of knowledge graphs (KG) has been widely explored by researchers to access information systems containing structured knowledge (Kuck G., 2004). This graph-based representation of knowledge contains nodes that represent entities, linked to each other by edges that represent relationships. The relationships can be organized into schemas or ontologies to better interpret the represented data (Zou X., 2020). Evolving as models for describing and querying heterogeneous data, knowledge graphs appear to have real-world semantics. Semantics rely on the domain, a concept emerged by ontologies. The domain of interest is best described by the structure of the ontology, which contains entities(nodes), properties or predicates (edges), constraints and axioms all contributing to a comprehensive, directed graph (Kejriwal M., 2022).

REFERENCES

1. Berners-Lee, T., Hendler, J. and Lassila, O., 2001. The Semantic Web. Scientific American, May 2001.

2. Zou, X., 2020. A Survey on Application of Knowledge Graph. Journal of Physics: Conference Series, 1487, p.012016. Available at: https://doi.org/10.1088/1742-6596/1487/1/012016

3. Kück, G., Tim Berners-Lee's Semantic Web. Leaf Wireless (Pty) Ltd. South African Journal of Information Management, May 2004.

4. Kejriwal, M., 2022. Knowledge Graphs: A Practical Review of the Research Landscape. Information, 13(4), p.161. Available at: https://doi.org/10.3390/info13040161

# **Materials & Methods**

• Approximately 1000 words. This should be a concise outline of all

steps followed, all methods used (and explained), all parameters, etc.,

structured logically. It should not include any results.

- It is common to use subheadings.

• This is commonly carried out third

## **Section1**

## **Section2**

## **Section3**

## **Section4**

# **Results & Discussion**

• Results and Discussion: approximately 1000 words. This should be an objective presentation of all results, followed by interpretation based on the numbers (not intuition!). This is a good place to mention any shortcomings and reasons behind these.

• Do not overflow this with 47 figures and tables, provide those necessary to

show your analysis (those that contribute to your story) and place the rest in the appendix.

• This is commonly carried out second

Leaving an example for graph:

An x-ray of a chest

Description automatically generated

Figure 1: Original not processed slice 341/Patient 006

# **Conclusion and Future Work**

Conclusion and Future Work: approximately 700 words. This contains a very brief summary of the results, leading to the decision as to whether or not the goal was fulfilled and why. It is common to reiterate a major shortcoming and provide realistic future work, i.e. use a different method and why, try to include more data from source X, apply the same methodology to a different problem (transferability of your work is very useful), or the like.

• References: Approximately 10. Choose any style you wish but be consistent.

• Appendix (optional): Place extra figures, tables, explanations (?), etc.

# **References**

# **Appendices**

## **Appendix 1**

## **Appendix 2**

## **Appendix 3**