MSC Artificial Intelligence: Research Methods and Professional Practice

Unit 4

OUTLINE: IMPLEMENTING MACHINE LEARNING TOOLS AND/OR TECHNIQUES IN SUSPECT PROFILING

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1 - Introduction: 150 words

1-1 - Context & Background

- Introduction to current suspect profiling tools/techniques.

- Highlight the need for machine learning implementation in suspect profiling.

- Brief introduction to the possible effects of the implementation.

1-2 – Objectives

- Define the audience (Government intelligence agencies, FBI, CIA...)

- Define the purpose of the literature review (Facilitate suspect profiling process, Improve investigation process...)

- Overview of the paper structure.

2 - Methodology: 100 words

2-1 – Structure of the literature review

- Structured systematic literature review.

- Data extraction by industry domain.

2-2 – Strategy of research

- What keywords were used?

- From which sources?

2-3 – Criteria & rationale

- Selection focused on recent publications of within the last 6 years

- Maximum 20 years old

- What types of literature were included (Case studies, journals, research papers...)

3 - Literature Overview: 700 words

3-1 – Suspect Profiling systems

- Definition of suspect profiling systems and their types.

- Overview of profiling systems in suspect identification and their importance.

- Explain the existing challenges. (Manual process, potential human errors...)

3-2 – Machine Learning in profiling systems

- Discuss machine learning and its advantages

- Analysis of machine learning applications in suspect profiling.

3-3 – Current implementations

- Include any examples of current implementations of Machine learning in suspect profiling systems.

4 - Critical Evaluation: 700 words

4-1 – Comparison of views

- Showcase any similarities or contradictions between the literature.

4-2 – Strengths & limitations

- Highlight the strengths and weaknesses of the literature as well as potential gaps.

4-3 – Ethical considerations

- Discuss potential bias or unfairness.

4-4 – Results Discussion

- Highlight the similarities and differences of the results as well as the implications.

5 - Future: 200 words

- Gaps and potential areas for research.

- Proposed solutions and improvements for the limitations of implementing Machine learning in suspect profiling.

- Identify potential regulations necessary to avoid ethical implications.

- Include emerging trends & technologies and what impacts they might have on profiling.

6 - Conclusion: 150 words

- Summary of key findings.

- What needs to be done.

- Concluding sentences.

7 - References: