

SUMMER RESEARCH 2024/25

PROJECT ABSTRACT



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

PROJECT # 9

SUPERVISOR/S:	Dr Brendan Sheridan & Krista Yuen
PROJECT TITLE:	Exploring APA Writing Style's Guidelines with Artificial Intelligence
FIELD:	Computer Science/Data Science/Writing Studies
DIVISION/SCHOOL:	Te Puna Ako
PROJECT LOCATION:	Hamilton

PROJECT ABSTRACT:

APA 7th edition is not just for referencing. The style “helps writers present their ideas in a clear, concise, and inclusive manner” (APA Style, 2024). This research project is situated at the intersection of Computer Science, Data Science, and Writing Studies. Through a structured set of tasks, the project aims to develop an AI-driven solution for assessing and advising for writing in APA style. The project envisions creating a prototype AI checker that aligns text with APA writing conventions, while exploring the scalability and adaptability of such tools across different writing styles. Expected outcomes include the creation of the prototype AI tool and insights into developing similar tools for varied writing styles. The project harnesses student skills in coding, algorithm understanding, report writing, critical thinking, and effective communication.

STUDENT SKILLS:

- Coding ability in Python (preferred), WEKA, or R
- Understanding of algorithms which are part of data analysis, machine learning, Artificial Intelligence
- Experience in writing project reports in Microsoft Word, Google Docs, or similar
- Critical Thinking, Time Management, Communication skills

PROJECT TASKS:

1. Setting up the necessary software and tools for development, including IDEs, version control systems, and relevant libraries/frameworks.
2. Conduct a literature review and analysis of existing AI tools or algorithms related to style checking and text analysis. Assess models and algorithms most suitable for style checking such as accuracy, efficiency, and scalability.
3. Work with supervisors to annotate the collected data according to the specific style guidelines, identifying key elements and patterns. Also prioritising parameters based on complexity.
4. Develop a basic prototype of the AI tool, integrating the selected model and implementing initial functionalities.
5. Model training and optimization of the prototype AI model using the annotated data, fine-tuning parameters, and optimizing performance metrics.
6. Prepare a poster presentation summarising the project objectives, methodology, results, and future directions.

EXPECTED OUTCOMES:

- Student's Research Poster (as per clause 6 of the [Scholarship regulations](#))
- Creation of a prototype AI checker for advising corrections in line with APA 7th edition writing style.
- Explore the feasibility of developing similar AI checkers with other academic writing styles.
- Share data with other interested parties who might be able to take this research further
- Explore the feasibility of a single AI checker with multiple academic writing styles with the help of LLM (Large Language Models).

