BRANDON SMITH

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🎓 EDUCATION

Deakin University   June 2024
Bachelor of Data Science   *Current WAM: 96.4*

Achievements:

- The Mathematics Yearbook 2023 (Deakin Mathematics Research and Teaching Lab)
- Research Scholarship (Machine Learning for Decision Support (MLDS) Group)
- 1st Place Winner of the Deakin Simpsons AI Challenge 2023 - solutions: (code)(paper)

💼 EXPERIENCE

Data Systems Officer | *Arts Planning & Performance, Monash University*   Aug. 2023 – Present

- Developed an automated report, consolidating various data sources into an Excel file with visualisations to support course reviews within the Faculty of Arts.
- Re-modularised and restructured Python scripts for increased efficiency and cleaner code, improving data processing workflows.
- Completed ad-hoc reports as needed, supporting various faculty departments with timely and relevant data insights.
- Monitored and distributed reporting updates and data across different teams within the faculty.

Research Assistant | *(MLDS) Group, Deakin University*   Sep. 2023 – Present

- Developed novel approaches, including custom sentence embedding within neural networks, to enhance author attribution accuracy.
- Advanced text pre-processing techniques for improved data visualisation.
- Computed various text statistics for deep stylometric analysis, contributing to the detection of contractual or AI-generated text.

Senior Administration Officer | *Monash Abroad, Monash University*   Mar. 2022 – Aug. 2023

- Automated data pre-processing for team's database, enhancing data integrity and management through efficient extraction and importation from various systems.
- Developed a comprehensive Smartsheet project to manage enrolments of incoming exchange students, incorporating various automation's. This tool is used by the incoming team at Monash Abroad and all faculties involved with exchange students at Monash University.
- Provided and produced business reports as needed, supporting decision-making and operational improvements.
- Conducted monthly audits on the database to ensure accuracy and compliance with data standards.

🔧 PROJECTS

Detecting Contract Cheating | *Python, Neural Search*   May 2023 – Present

- Analysed and pre-processed a large volume of text data to differentiate writing styles among authors.
- Trained bi-encoders using complex training methods to generate vector representations that capture individual author styles rather than the semantic content of the text.
- Improved detection accuracy of LLM-generated text through the development of custom embeddings, applying innovative solutions.

Text-to-SQL with Context Generation Framework | *Python, SQL, Semantic Search*   Jan. 2024

- Translation framework to facilitate natural language queries into SQL queries.
- Incorporated a dual retrieval strategy, initially querying a historical database of past SQL queries for context reuse, then conducting a semantic search in user database metadata for new or unique queries.