Samuel Peterson M.Sc

DATA SCIENTIST

Melbourne, Aus | (+61) 428060052 | samdpeterson1999@gmail.com

GitHub: github.com/Brum99 | Portfolio: www.sam-portfolio.tech

Summary

Machine Learning Engineer with a Master's in Data Science and hands on experience delivering AI solutions in surgical robotics and evaluating LLM systems. Proven ability to build robust pipelines, optimise model performance, and extract actionable insights from complex data. Selected to contribute to elite model evaluation teams, bringing technical excellence, analytical rigour, and a deep understanding of scalable ML architectures.

Experience

Outlier AI / LLM Specialist – Programming Evaluation **Oct 2024 – Present**

- Conducted systematic evaluation and monitoring of large language model performance, following strict operational procedures and documentation protocols
- Analysed 200+ complex system outputs monthly, identifying performance patterns and ensuring data quality through rigorous validation processes
- Selected for specialised expert team of PhD and Master's level contributors, demonstrating ability to work in high-precision technical environments
- Applied statistical analysis to identify failure patterns in reasoning and code generation, contributing to system improvement and calibration.

IMRA Surgical Robotics / Machine Learning Research Assistant **Jul 2023 – Nov 2023**

- Implemented state of the art 3D Convolutional neural network models for real-time surgical skill classification using robotic apparatus data
- Developed end to end data acquisition and processing pipelines using Python and AWS, ensuring continuous data quality and system reliability
- Collaborated with surgical experts and engineers in multidisciplinary team environment, facilitating communication between technical and domain specialists
- Built robust preprocessing and modelling workflows, achieving accurate classification results and establishing protocols for future research applications

Projects / Website - www.sam-portfolio.tech

- MRI Brain Tumor Classification: Built supervised ML model for medical imaging data classification, achieving over 94% recall through rigorous feature engineering and model optimisation. Implemented comprehensive data validation and quality assurance processes. Technologies: Scikit-learn, TensorFlow, Pandas, NumPy, Jupyter

Education

RMIT University / Master of Data Science **2024**

Major: Data Science | Relevant: Machine Learning, Big Data(Spark, Hadoop), NLP, Statistical Modelling

RMIT University / Graduate Certificate of Data Science **2021**

Focus: Foundational programming, applied statistics, and data analytics

RMIT University /Bachelor of Applied Science (Biological Science) **2020**

Major: Mathematics | Relevant: Applied Computing, Data Analysis

Certifications & Professional Development

- Microsoft Azure Data Scientist Associate (DP-100) - In Progress
- Strong commitment to continuous learning in scientific computing and data analysis methodologies

Volunteering

Peer Mentor / Advanced Programming **Jul 2023 - Nov 2023**

- Provided technical mentoring to students in collaborative learning environment, demonstrating ability to communicate complex technical concepts to diverse audiences
- Facilitated knowledge transfer and supported development of programming competencies

Skills

Machine Learning & AI:

Python, TensorFlow, Scikit learn, Deep Learning, 3D CNNs, NLP, Statistical Modelling, Model Optimisation

Data Analysis & Engineering:

Data Pipelines, ETL, Large scale Data Processing, Time Series Analysis, Feature Engineering, Data Validation

Mathematical & Statistical Analysis:

Advanced Statistics, Numerical Analysis, Data Synthesis, Performance Bounds Analysis, Model Validation

Cloud & Big Data Technologies:

AWS, Azure (DP-100 in progress), Apache Spark, Hadoop, PySpark, SQL

Software Development:

Data Structures, Algorithms, Version Control (Git), System Design, Performance Optimisation

Tools & Frameworks:

Jupyter, Pandas, NumPy, Matplotlib, Seaborn, VS Code, Docker