

Samuel Peterson, MS

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Summary

Data Scientist with a Master's in Data Science from RMIT University and hands-on experience developing deep learning models for surgical skill classification. Proven ability to design AI pipelines, analyze complex data, and apply ML to real-world use cases. Strong coding background in Python and Java with a foundation in biology and applied science.

Skills

• Python • Machine Learning • Data Science • Big Data Processing • Web development • Java
• Amazon Web Services • SQL • R • Data Analysis/Visualization • NLP • Hadoop
• Apache Spark • Time Series Forecasting

Experience

Outlier AI / AI Trainer – Coding Expert (Remote, Contract) - October 2024 – Present

- Analyze and evaluate the reasoning and coding capabilities of large language models (LLMs), identifying failure modes and providing high-quality training examples.
- Selected to join a specialized expert team of PhD and Master's level contributors focused on complex prompt design, including humanities final exams.
- Deliver actionable feedback to improve model generalization and accuracy across diverse problem domains.

IMRA Surgical Robotics / ML Research Assistant - Jul 2023 - Nov 2023

- Designed a 3D-CNN model for classifying robotic surgical skill levels using video data.
 - Collaborated with surgical experts to guide development and ensure domain accuracy.
 - Built a preprocessing and modeling pipeline using Python and AWS, and outlined future research directions.
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Projects

- **MRI Brain Tumor Classification:** Implemented machine learning model to categorize various brain tumors present in MRI scans. Achieved recall scores + 94%. SKLearn, Pandas, Numpy, Jupyter Notebook, Seaborn, Matplotlib.
 - **Surf Forecasting Application:** Developing a surf forecasting application that allows users to get surf reports from anywhere in the world. **Implemented time series forecasting models to predict wave conditions and surf quality.** Using stormglass.io APIs. **Time Series Analysis,** MySQL, Python, Java, HTML, CSS, Flask..
 - **Job-Seeking NLP Prototype:** Job-seeking prototype application in Flask that utilizes NLP to categorize the user's target industry based on their job advertisement posting. NLP, Word2Vec, Flask, Python, Pandas, Numpy.
 - **Big Data Clustering Analysis:** Implemented MapReduce clustering algorithms using Hadoop and Spark for large-scale data processing. Hadoop, Apache Spark, Python.
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Education

- **RMIT University / Masters of Data Science**
July 2021 - June 2024
Relevant: Machine Learning, Big Data(Spark, Hadoop), NLP, Statistical Modelling
- **RMIT University /Bachelors of Applied Science**
March 2018 - Nov 2020
Relevant: Applied Computing, Data Analysis

Volunteering

Peer Mentor / Advanced Programming - Jul 2023 - Nov 2023

- Supported students by answering technical questions and mentoring during practical sessions.