Lee W. A. Scott

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EDUCATION

University of St Andrews *Sep. 2021 – May 2025*
BSc (Hons) Mathematics (Expected 2:1)

University of Glasgow Sutton Trust Summer School *Jul. 2020*
Engineering Academic Skills (A)

Greenfaulds High School *Aug. 2015 – Jun. 2021*
Advanced Highers: Mathematics (A), Art and Design (C)
Highers: Mathematics (A), English (A), Physics (A), Computing Science (A), Graphic Communication (A), Design and Manufacture (A), Art and Design (A)

WORK EXPERIENCE

Sales Associate – TAAKs of Scotland *Sep. 2024 – Mar. 2025*
Handled sales, managed store closing/operations and provided customer service. Developed strong organizational skills through maintaining the store. Enhanced collaboration and initiative by working effectively within a team to meet sales targets and deliver a positive customer experience.

ACADEMIC PROJECTS

Optimal Treatment Methods for Breast Cancer Patients and Involvement of the Estrogen Receptor Gene (ESR1) in Method Choice Sep. 2024 – Dec. 2024
Explored the relationship between ESR1 gene expression levels and breast cancer treatment outcomes using the NKI Breast Cancer Dataset. Conducted an exploratory data analysis (EDA) and utilized statistical techniques (polynomial regression, Pearson correlation, hypothesis testing) to identify trends in survival outlooks and treatment efficacy across gene-expression/treatment subgroups.

Machine Learning-Driven Predictions for Customer Fixed Term Saving Deposit Uptake Jan. 2025 – Feb. 2025
Built predictive models using Scikit-Learn to classify if a customer would make a fixed-term saving deposit using bank marketing data from the UCI ML Repository. Performed an EDA, addressed class imbalances, engineered features and developed a pipeline to prepare for training. Trained and fine-tuned three different models using grid search and cross validation (macro average F1-score of 0.73 on test set for best performing model).

United Kingdom Surface Temperature Regression Integrating Spatio-Temporal Features Mar. 2025 – Apr. 2025
Worked in a team (adhering to an agreed contract) to develop models for temperature prediction – experimented with three standard regression architectures and one artificial neural network on a sampled ERA5 dataset. Developed a shared preprocessing pipeline for handling various types of data, investigated spatio-temporal engineered feature performance impact and hyperparameter tuned models. Best model achieved a RMSE of 1.24 and R2 of 0.94.

BSc Dissertation – Multi-Model Comparative Study of Data Augmentation Techniques for High and Low Risk Pigmented Skin Lesion Classification Sep. 2024 – Apr. 2025
Developed and evaluated eight convolutional neural network models – pairing LeNet-5 and EfficientNetV2-B0 each with four separate augmentation strategies (no augmentation, manual warping, grid-search optimized warping and GAN-based oversampling) – to distinguish between typical and atypical pigmented lesions from the HAM10000 dataset. Applied early stopping, callbacks and dropout to mitigate overfitting. Data augmentation improved metrics across all architectures, with the strongest model achieving an accuracy of 90.32% (+2.5% from baseline, +8.78% from lowest performing) and an F1-score of 86.95% (+2.15%, +10.6%). Documented processes, results and proposed avenues for future developments.

AWARDS

General Wardlaw Scholarship – University of St Andrews *2021*
Awarded a merit-based scholarship recognizing academic excellence in underprivileged students.

1st in Advanced Higher Mathematics – Greenfaulds High School *2021*

The Ascent – Saltire Award (50 Hours Volunteering, Completed at XS Taekwondo) *2020*

CERTIFICATIONS, SKILLS & EXTRACURRICULAR ACTIVIES

Certifications: Artificial Intelligence Fundamentals (IBM), Emerging Technologies (IBM). Completed courses to strengthen core competencies in machine learning, natural language processing, and industry-relevant technologies. Gained practical insights into real-world applications of artificial intelligence workflows across various domains.

Programming Languages: Python, R, Java

Frameworks/Libraries: TensorFlow, Keras, Scikit-Learn, tidyverse, Git, NumPy, Pandas, Matplotlib, Seaborn

Tools and Software: Microsoft Office Suite, Jupyter Notebook, Adobe Photoshop, Cinema 4D

Activities: Scuba Diving (BSAC Ocean Diver) – University Sub Aqua Committee (Social Secretary, responsible for organizing meetings and promoting inclusivity). Taekwondo – earned a black belt and volunteered as an instructor, competed in Scottish, British and Pan-European Championships. Chess, art/design, football, golf, hiking and cooking.