Elio YE

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CAREER OBJECTIVE

Second-year UCL Mathematics undergraduate with strong foundations in mathematical modelling and programming. Interested in machine learning and its applications in data-driven problem solving, seeking internship opportunities to apply and expand technical expertise.

EDUCATION

University College London(UCL)   London, UK
BSc Mathematics   *09/2024 – expected 06/2027*
First-year grade: **2:1**
Relevant modules: Linear Algebra, Probability and Statistics, Calculus
Developed strong foundations in mathematical modelling, data analysis, and computational problem-solving.

TECHNICAL SKILLS

Programming: Python(including NumPy, Pandas, matplotlib), Lean
Machine Learning / Deep Learning: basic experience with neural networks, Convolutional Neural Networks (CNNs)
Mathematics: Linear Algebra,Analysis, Calculus
Tools & Platforms: Git/GitHub, Kaggle, LaTeX, Microsoft Office (Excel, Word, PowerPoint)

PROJECTS

UCL summer project: (05/2025-07/2025)
Explored the use of the Lean proof assistant for mathematical proving and verification.
- Applied Lean to formalize and verify analysis theorems, including the proof that every bounded monotonic sequence converges.
- Gained experience with computer-assisted reasoning and the intersection of logic, mathematics, and programming.

Kaggle Competition – Digit Recognizer:
Achieved a score of **0.99346** on Kaggle's Digit Recognizer competition using the MNIST dataset.
- Implemented a Convolutional Neural Network (CNN) with data augmentation, batch normalization, and dropout to improve model robustness.
- Applied 5-fold cross-validation and model ensembling, averaging predictions across multiple trained models for higher accuracy.
- Integrated early stopping and learning rate scheduling to optimize training efficiency and prevent overfitting.
- Processed and visualized results using Python (NumPy, pandas, Matplotlib) and exported predictions for Kaggle submission.

ADDITIONAL INFORMATION

Languages: English (fluent), Mandarin and Cantonese (native).

Work Eligibility: Eligible to work in the UK out of term time.