

Tom Lam

Computer Science Student | Machine Learning Enthusiast

📞 +44 7508 122399 ✉️ tom.lam@odns.hk 🌐 [Homepage](#) [LinkedIn](#) [Github](#)

SUMMARY

- First year computer science student with a passion in computer vision
- Solid foundation in Python programming, data structures and algorithms
- Familiar with data analysis and ML tools, e.g. PyTorch, Scikit-learn, Matplotlib

PROJECTS

Land Cover Segmentation with UNets | *Python, PyTorch, Matplotlib, Numpy, ML* | [GitHub](#)

- Re-implemented UNet and ResUNet-a in PyTorch
- Trained the models to perform semantic segmentation on the Multi-Source Satellite Imagery for Segmentation Dataset on Kaggle
- Visualize the segmentation results, model accuracy and IOU scores with Matplotlib

LeNet-5 from Scratch | *Python, Numpy, Pillow, ML, Linear Algebra, Tkinter* | [GitHub](#) [Image](#)

- Re-implemented the LeNet-5 model from Yann Lecun's paper (1998) using numpy
- Created a handwritten digit recognition app with my LeNet-5 model
- Implemented a primitive neural network library with a handful of NN modules

Layers: Linear, Conv, Flatten, RBF, ReLU, Tanh, SoftMax, Sigmoid

Criteria & Optimizers: MSE, CrossEntropy, BCE, SGD, Adam

Normalization & Regularization: MaxPool, AvgPool, BatchNorm, Dropout

Initialization: Xavier, Kaiming, LeCun

Rice Image Classification | *Python, PyTorch, Matplotlib, ML, Scikit-learn, Seaborn* | [GitHub](#)

- Created a CNN model to classify the 5 types of rice from the Rice Image Dataset on Kaggle
- Visualized the model accuracy and results with graphs and confusion-matrices
- Achieved an accuracy and average F1-score of over 99%

Fuzzy Trie | *Python, OOP, Dynamic Programming, Data Structures, Unit Tests* | [GitHub](#)

- Constructed a prefix-tree data structure with approximate string matching function
- Re-implemented the fuzzy search algorithm modified from Shang and Merrettal's paper (1988)
- Developed following OOP principles and PIP8 Python style guide
- Utilized the Python unittest library to create test cases for the tries

EDUCATION

University of Bristol

B.Sc. Computer Science

Bristol, UK

Sep 2024 - Present

University of Warwick [🎓](#)

International Foundation Programme in Computer Science

Coventry, UK

Sep 2023 - Jun 2024

- Grade: Distinction (92%) - Pure Maths 97%. Further Maths 98%. Computer Science 90%

SKILLS

Programming languages: Python, C, Haskell

Web Frameworks: Django

Data Analysis Tools: Matplotlib, Numpy, Pandas, PyTorch, Scikit-learn, OpenCV, Pillow

Languages: English, Cantonese, Mandarin

COURSES & CERTIFICATIONS

IBM AI Engineering (online course) [🌟](#)

Issued Jul 2024 by Coursera — Authorized by IBM

TEST SCORES

IELTS Academic — 8.0 (C1)

Dec 2023

- Reading: 9, Listening: 9, Writing: 7, Speaking: 6.5