

DING-GANG LIN

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EDUCATION

University of Manchester

Sept 2021 - Jun 2024

*Bachelor of Science in Computer Science, **First Class Honours***

United Kingdom

- Developed a machine learning k-Nearest Neighbors classification model for news articles in Python, leveraging both Euclidean and cosine distances. Utilized k-fold cross-validation to meticulously select the optimal hyperparameters for enhanced model performance, gaining an accuracy of 97.5% on the test set.
- Operated in a team to fix bugs and implement new features to the open source code of the Stendhal game using JavaFX, Ant, JUnit4 and Git.
- Implemented sparse (Bag of Words with tf-idf) and dense static (Word2Vec) representations to estimate term similarity in Python. Emphasised experimentation with context size and pre-processing techniques, resulting in an achieved accuracy of 70% for both representations, obtained through training on 8257 documents.
- Implemented and evaluated two solutions for multi-label text classification, a traditional classifier (SVM), and fine-tuning pre-trained models (BERT), emphasising hyperparameter experimentation for optimal performance on the formative evaluation in Python.
- Created an Email Spam Filter using Pandas and Numpy, implementing Naïve Bayes Theorem with 97% accuracy on pre-prepared data samples.

Wilson's School

Sept 2014 - Jun 2021

Mathematics A, Further Mathematics A*, Computer Science A*

London, United Kingdom

PROJECTS

Implementation of a Blockchain-based cryptocurrency

Sep 2023 - April 2024

Personal Project

Manchester, United Kingdom

- Performed extensive research to produce a simulation of a blockchain based on the UTXO model and the Proof of Work consensus mechanism in Java.
- Provided functionality of peer-to-peer networking, where transactions and blocks can be sent across the network.
- Attended weekly meetings with the project supervisor to discuss project progress, receive feedback, and refine implementation strategies.

Unity C# Project: Animal Crossing RPG

May 2020 - June 2021

Personal Project

- Aimed to create a turn-based role playing game based on the video game Animal Crossing: New Horizons in a team of two in Unity.
- Developed organisational, critical thinking and creativity skills to create the character designs in pixel art and set milestones for each week.
- Self-learned C# in Unity and ultimately achieved a functioning battle system, a third person movement system and a dialogue system in C#.

WORK EXPERIENCE

Mesmerise

July 2022 - Sep 2022

Internship: Data Science Team

London, United Kingdom

- Created a program in Python that converted the company's salaries into foreign currencies, considering factors such as the GDI or GDP.
- Proactively evaluated the VR app Gatherings, providing actionable improvement suggestions for each room and their potential uses, which were discussed and implemented in daily meetings.
- Conducted in-depth research on text readability in VR rooms and rigorously tested the accuracy of the developed model, enhancing user comprehension and experience.