MINJAE KANG

(+44) 7947 485975 | jerrykang135@gmail.com

EDUCATION

University College London (UCL), London, UK Sep 2017 – June 2021
MEng Computer Science; Expected Result: First-class or Upper Second-class honours
Completed Modules: Introduction to Deep Learning, Statistical Natural Language Processing, Information Retrieval and Data Mining

Abbey College Cambridge, Cambridge, UK Sep 2014 – June 2016
A-Levels**:** Mathematics (A*), Further Mathematics (A), Physics (A)

PROJECTS

Information Retrieval and Ranking with Deep Learning, London, UK Jan 2021 – Mar 2021

- Developed information retrieval models that return a ranked list of documents relevant to a query.
- Applied text preprocessing and tf-idf weighting to queries and documents and implemented BM25 and a query likelihood language model.
- With pre-trained dense word embeddings, GloVe, implemented ranking models with Logistic Regression, LambdaMart, and Ranknet.
- Used Python pandas, NumPy, nltk, and Tensorflow/Keras on Jupyter Notebook.

Comparative Analysis of News Topic Classification Models, London, UK Jan 2021 – Mar 2021

- Carried out a comparative analysis of deep learning models: RNN, GRU, LSTM, BiGRU, and fine-tuned BERT for news topic classification task.
- The study aimed to explore the state-of-the-art pre-trained word embedding, BERT, on news topic classification.
- Trained and tested the models with BBC News dataset using Python Tensorflow/Keras.
- Compared the performance of the models with Accuracy, F1-score, Precision, and Recall metrics.

Multi-label Classifier with Unsupervised Pretraining, London, UK Oct 2020 – Dec 2020

- Trained Deep Neural Network models on the Fashion MNIST dataset with Python Tensorflow/Keras.
- Implemented an unsupervised learning model, a Convolutional Autoencoder, for extracting data features.
- Implemented a supervised learning model, a multi-label image classifier, with a pre-trained convolutional autoencoder encoder to improve the classifier's overall performance.
- Evaluated the performance of the models with Accuracy, F1-score, Precision, and Recall metrics.

Cross-department Smart Classroom IoT Project, London, UK Jan 2020 – April 2020

- Delivered a smart classroom prototype that autonomously controls a classroom environment(temperature, brightness, and humidity) and monitors the room's security.
- Designed and built an Internet of Thing (IoT) system with a CC3200 launchpad and environment sensors.
- Developed a data pipeline with IBM cloud and created a dashboard UI with IBM Node-Red.
- Analysed and visualised the data collected with Python pandas and NumPy.
- Led a team of four; allocated tasks according to one’s strengths and capabilities.

WORK EXPERIENCE

Data Engineer Intern at Balaan; an Online E-commerce start-up, Seoul, Korea June 2020 – Oct 2020

- Built a data pipeline that collects business data using AWS Cloud services S3 and Athena as a Business Intelligence platform to serve across the firm.
- Automated the Google Analytics data retrieval process and its data transferring process to the AWS cloud.
- Created BI dashboards with AWS Quicksight to show weekly KPIs and achievements for employees and use for the company decision-making.
- Automated the data cleaning, mapping, and processes with the relevant crawling tools and MongoDB.
- Developed a set of utilisation tools to assist the data management, maintenance and crawling.
- Adapted to the company’s OKR culture and learned about goal setting and priority.

Private A-levels Physics Tutor, Seoul, Korea July 2016 – August 2016

- Ran one-to-one teaching sessions 12 hours per week.
- Prepared all the teaching materials and handled admin tasks, for example, renting a classroom.
- Adapted different approaches to improve students’ results according to their strengths and weaknesses.

SKILLS

- **IT Skills:** C/C++, Python (NumPy, Pandas, Scikit-learn, TensorFlow/Keras) JavaScript, Node.js(Express), Amazon Cloud Services (S3, Athena, Quicksight), MongoDB, SQL, GitHub
- **Languages:** Korean (native),English (fluent),Chinese(beginner)