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Education

- **Imperial College London** London, UK
  Master of Applied Computational Science and Engineering *Sep. 2023 – Oct. 2024*
  - **Core Courses**: Machine Learning, Parallel Computing, Probability and Mathematical Statistics(100), Numerical methods, C++, Deep learning
- **Chinese University of Petroleum-Beijing** Beijing, China
  Bachelor of Engineering - Automation; GPA: 88.01/100 *Sep. 2017 – June. 2021*

Experience

- **AIP** London, UK
  Personal Research *June 2024 - Present*
  - **Geonatiq LTD-Commodity Prices Prediction**: Use machine learning and sentiment analysis to predict commodity prices.

Projects

- **Predicting Tropical Cyclone Behavior through Deep Learning**
  Personal Research *Jan 2024*
  - Constructed a deep learning model using PyTorch, predicting subsequent storm imagery for three future time points, and storm velocity for multiple consecutive moments, based on historical storm data and satellite imagery.
  - Primarily responsible for building a CNN-ConvLSTM model, using the first ten time points of temporal labels, ocean labels, and storm images as input to predict the storm velocity at the last time point.
  - GitHub: https://github.com/ese-msc-2023/acds-the-day-after-tomorrow-yolanda.git
- **Gerardium Rush Optimization Project**
  Group Research *May 2024*
  - Developed an optimization tool for mineral processing circuits using C++ and genetic algorithms. Enhanced computational efficiency with parallel processing via OpenMP and MPI.
  - Key Achievements: Implemented core simulation and genetic algorithm in C++. Utilized OpenMP and MPI to accelerate simulations, improving performance and scalability.
  - GitHub: https://github.com/ese-msc-2023/acs-gerardium-rush-pentlandite
- **X-ray Finger Image Generation and Discrimination**
  Personal Research *Jan 2024*
  - In the first part, trained a GAN or VAE generative model to create images of human hands under X-ray.
  - GitHub: https://github.com/ese-msc-2023/dlmodule-coursework-1-acse-pt623.git
  - In the second part, trained a ResNet34 model capable of distinguishing between real images, and those generated by GAN and VAE.
  - GitHub: https://github.com/ese-msc-2023/dlmodule-coursework-2-acse-pt623.git
- **Data Science and Big Data Analytics - Theory and Practice Online Project** MIT
  Group Research,Professor Mark Vogelsberger, MIT *Aug 2020 - Sep 2020*
  - Extracted data from the web and large databases, focusing on MongoDB. Developed machine learning models using TensorFlow and Keras.
  - Implemented an AI-based doctor application capable of interacting with patients through NLP and detecting cancer through CNN-based image analysis.
  - Implemented an AI-based doctor application for NLP and cancer detection using CNNs. Published a paper at IPEC 2021.

Programming Skills

- **Programme Languages**: Python, C++, Matlab, Java, Assembly Language **Language**: Mandarin (native), English (fluent), French (beginner)