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SUMMARY

Master's graduate in computational science with industry experience in deep learning algorithms applied to time series prediction using cloud data flow tools such as Databricks. Proficient in Python and C++ object oriented programming, I always strive to exceed targets, work efficiently and communicate effectively.

EDUCATION

Master of Science: Applied Computational Science **Sept 2019 - Sept 2020**
Imperial College London - London, UK

- **Relevant Coursework:** PyTorch Classification and Transfer Learning, Machine Learning, Optimisation, Numerical Methods, C++ Advanced Programming
- Thesis title: *Deep Learning in Virtual Flow Metering*

Bachelor of Engineering (Hons): Mechanical Engineering with Finance **Sept 2016 - July 2019**
University College London - London, UK

- Thesis title: *Particle Suspensions in Microfluidic Applications*

WORK EXPERIENCE

Graduate Teaching Assistant: Applied Computational Science **Sept 2020 - Present**
Imperial College London - London, UK (Remote)

- Supported student learning by holding office hours to explain solutions, methods and key concepts of programming and machine learning.
- Maintained academic excellence through coaching 10 students on work habits and mental health with one-on-one meetings.

Data Science Intern **June 2020 - Sept 2020**
Wintershall DEA - Hamburg, Germany

- Streamlined project management and decision making by performing statistical and bi-variate analysis of 13 years of raw industrial oil production data on Azure Databricks using Apache PySpark.
- Designed interactive visualization of the data in Python using Plotly and HVplot for more effective data comprehension and analysis.
- Successfully forecast production rates with RMSE <1% by applying various LSTM recursive neural networks using Keras and monitoring the life cycle with MLflow.
- Formally communicated forecast results by presenting company-wide L3 presentation.

Primary Mentor **May 2019 - July 2019**
UCL MechSpace - London, UK

- Coached students on design and technical platforms such as CAD and ARDUINO systems which ensured the success of projects such as the Hydrone Hydrogen Racecar.
- Oversaw the safety of the workshop by supervising working students, facilitating machine operations, and training students in processes such as 3D printing and laser cutting.

PROJECTS

CIFAR-10 Py **2020**

- Placed in the top 10 (categorization Accuracy 0.8) by applying PyTorch transfer learning with EfficientNet to classify over 10,000 images in a school Kaggle competition.

Conway's Game of Life in Parallel C++ **2020**

- Implemented Game of Life in parallel using C++ MPI and object oriented programming wherein the number of cores is user-configurable with a post processing script developed in Python.

Micro-Particles Image Processing Matlab **2019**

- Processed over 2000 images using self-written MATLAB border contour, filling and counting scripts and analyzed results using particle suspension rheology theory.

SKILLS

Languages	Native English and French, conversational Spanish
Programming	Python, C++, MATLAB, Bash, \LaTeX , HTML, MySQL, Dox BAT
Packages	Keras, PyTorch, PySpark, MLflow, sklearn, XGBoost, Plotly, HoloViews, C++ MPI
Technical	Databricks, Apache Spark, Microsoft Office, GitHub, CATIA V. 5, Origin Pro