Nicolas Trinephi

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Employment History

Data Science Intern June 2020 - September 2020
Wintershall DEA - Hamburg, Germany

- Developed sustainable object oriented **Python** code for virtual flow metering from the ground up.
- Performed statistical analysis, bi-variate analysis and designed interactive visualization of 13 years of raw industrial oil data.
- Successfully forecast production rates with 99% accuracy using **Keras** and **Databricks**.

Primary Mentor May 2019 - July 2019
UCL Mechanical Engineering Workshop - London, UK

- Oversaw the safety of the workshop by supervising working students, facilitating machine operations and monitoring entry and exit of students in the workshop.
- Facilitated CAD, coding ARDUINO systems and manufacturing of projects such as the Hydrone Hydrogen Racecar which required supervision in 3D printing, laser cutting, etc.

Education

Master's of Science: Applied Computational Science September 2019 - September 2020
Imperial College London - London, UK

- **Core Modules**: Machine Learning, Inversion and Optimization, Parallel Programming, Numerical Methods, High Performance Computing
- Thesis title: *Deep Learning in Virtual Flow Metering*

Bachelor's of Engineering(Hons): Mechanical Engineering w/ Finance September 2016 - July 2019
University College London - London, UK

- **Core Modules**: Mathematical Analysis, Fluid and Solid Mechanics, Control Theory, Thermodynamics, Engineering Dynamics, Elasticity and Plasticity, Accounting, Corporate Finance
- Thesis title: *Particle Suspensions in Microfluidic Applications*

Projects

Cifar10 *Py* 2020
Imperial College London

- Applied **pytorch** transfer learning with EfficientNet to classify over 10,000 images in school Kaggle competition and scored 0.8 (top ten).
- Investigated other networks like ResNet and vgg as well as keras implementations of ResNet.

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

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

Water Wave *C++* 2020
Imperial College London

- Implemented liquid physics of a 2D body of water with 4 team members in a container using time series calculations and object oriented programming (particle hydrodynamics).

Skills

Languages	**Native** English and French, conversational Spanish
Programming	Python, C++, MATLAB, Bash, LaTeX, HTML
Packages	keras, pytorch, pyspark, mlflow, sklearn, plotly, holoviews
Technical	Databricks, Apache Spark, Microsoft Office, CATIA V. 5, Origin Pro
Co-curriculars	Tae Kwon Do, Swimming, Piano, Guitar, PADI – Advanced Open Water Diver

References available upon request.