Nicolas Trinephi

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SUMMARY

Master's graduate in computer science with industry experience in deep learning algorithms using cloud data flow tools and .NET systems message passing. Proficient in scripting and object-oriented programming, I strive to exceed targets, work efficiently and communicate effectively and am seeking an opportunity in Software.

WORK EXPERIENCE

Graduate Teaching Assistant: Applied Computer Science **Sep 2020 - Jan 2021**
Imperial College London - London, UK (Remote)

- Supported student learning by holding office hours to explain solutions, methods and complex concepts of programming and machine learning.

Data Science Internship **Jun 2020 - Sep 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 and designed interactive visualization in Python using Plotly and HVplot.
- Produced optimized, reliable and well documented code and tests in DevOps using Agile software development methodology and object-oriented programming.
- Successfully forecast production rates with RMSE <1% by applying various LSTM recursive neural networks using Keras and MLflow.
- Formally communicated forecast results by presenting company-wide L3 presentation.

Primary Mentor **May 2019 - Jul 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.

EDUCATION

Master of Science: Applied Computer Science **Sep 2019 - Sep 2020**
Imperial College London - London, UK

- **Relevant Coursework**: PyTorch Classification and Transfer Learning, Machine Learning, Optimisation, Numerical Methods, C++ Parallel Programming, Message Passing Interface
- Research thesis title: *Deep Learning in Virtual Flow Metering*

Bachelor of Engineering (Hons): Mechanical Engineering with Finance **Sep 2016 - Jul 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
- Research thesis title: *Particle Suspensions in Microfluidic Applications*

PROJECTS

Société Générale Electricity *Py* **2021**

- Performed pre-processing and applied various machine learning algorithms to user data to predict whether consumers reduced their electricity consumption.

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++ MPI* **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.

Water Wave *C++* 2020

- 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++, C#, Java, MATLAB, Bash, LaTeX, HTML, CSS, MySQL, Dox BAT
Packages	Keras, PyTorch, PySpark, NLTK, MLflow, sklearn, XGBoost, Plotly, HoloViews, C++ MPI
Technical	Azure Events, Azure Databricks, Apache Spark, Microsoft Office, GitHub, CATIA V. 5, Origin Pro