Nicolas Trinephi

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SUMMARY

Creative graduate software engineer with industry experience using cloud data flow tools and .NET systems to produce tested and optimized code. Built automation and data forecasting software using time events and deep learning to reduce errors and improve data analysis. Proactive team player eager to leverage hard-work and dedication to forge a fulfilling career and lasting relationships.

EDUCATION

Master of Science: Applied Computer Science **Sept 2019 - Sept 2020**
Imperial College London - London, UK | GPA: 3.8

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

Bachelor of Science (Hons): Mechanical Engineering with Finance **Sept 2016 - July 2019**
University College London - London, UK | GPA: 3.6

- Research thesis title: *Particle Suspensions in Microfluidic Applications*

PROJECTS

Azure Data Transfer *3Phi Solutions* **2021**

- Proof of concept to find best way to replicate Pick database and send data to SQL server, currently using SQL Direct.
- Successful automatic transport of data to Azure Event Hubs using timer event console app. Currently testing Azure Data Lake.

Société Générale Electricity *Personal* **2021**

- Performed pre-processing and applied various machine learning algorithms to user data to predict whether consumers reduced their electricity consumption.
- Random Forest provides the best results.

CIFAR-10 *University - Group of 4* **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 *University* **2020**

- Implemented Game of Life in parallel console app using C++ MPI and object oriented programming wherein the number of cores is user-configurable with dynamic grid splitting.
- Post-processing visualization script developed in Python.

Linear Solver Package *University - Group of 3* **2020**

- Created linear algebra solver library in C++ for sparse and diagonal matrices using Cholesky, LU Decomposition and more.

WORK EXPERIENCE

Graduate Teaching Assistant: Applied Computer Science **Sept 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.

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

- Produced optimized and well documented code and tests in DevOps using Agile methodology and object-oriented programming.
- Successfully forecast production rates with RMSE <1% by applying recursive neural networks using Keras and MLflow.
- 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.
- Formally communicated forecast results by presenting at company-wide L3 conference.

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.

SKILLS

Languages	**Native** English and French, conversational Spanish
Programming	Python, C++, C#, Java, MATLAB, Bash, LaTeX, HTML, CSS, MySQL, Dox BAT
Packages	Tensorflow, MPI, Event Hubs, Async, Keras, PyTorch, PySpark, NLTK, MLflow, sklearn, XGBoost, Plotly, HoloViews
Technical	Azure Events, Azure Databricks, Apache Spark, Microsoft Office, GitHub, CATIA V. 5, Origin Pro

- References available upon request -