

# Nicolas Trinephi

✉ nicolas.trinephi@imperial.ac.uk

🌐 /in/nicolastrinephi

💬 @live:nicolas\_6754

📺 /ntrin

☎ +1(949)-506-8515

🔗 <https://ntrin.github.io/>

## Employment History

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

- Reinforced student learning by holding office hours to walk through solutions, methods and key concepts.
- Maintained academic excellence through mentoring 10 students on work habits and mental health with 1 on 1 meetings.

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

- Performed statistical analysis, bi-variate analysis and designed interactive visualization of 13 years of raw industrial oil data in **Python**.
- Successfully forecast production rates with 99% accuracy using **Keras** and **Databricks**.

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

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

## Education

**Master's of Science:** Applied Computational Science Sep 2019 - Sep 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 Sep 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).

**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	<b>Native</b> English and French, conversational Spanish
Programming	Python, C++, MATLAB, Bash, $\LaTeX$ , HTML
Packages	keras, pytorch, pyspark, mlflow, sklearn, plotly, holoviews, C++ MPI
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.