

# Tanguy Perron

+33.6.26.49.88.95 | [tanguy.perron19@imperial.ac.uk](mailto:tanguy.perron19@imperial.ac.uk) | [linkedin.com/in/tanguy-perron](https://www.linkedin.com/in/tanguy-perron) | [github.com/tlp19](https://github.com/tlp19)

## EDUCATION

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### Imperial College London

London, UK

*Master of Engineering in Electronic and Information Engineering*

*Oct. 2019 – Today*

- Currently in my final year.
- On track to achieve First class honours.
- Main modules studied: Artificial Intelligence, Machine Learning, Computer Vision, High Level Programming, Operations Research, Robotics, Embedded Systems, Software Systems, Digital Electronics and Computer Architecture.
- Optional modules undertook: Collective Intelligence, Designing Interventions for Behavioural Change, Creative Digital Platforms, and Introduction to Psychology.

### Lycée Blaise Pascal

Orsay, FR

*French Scientific Baccalaureat with Further Maths - Highest Honours*

*Sep. 2016 – July 2019*

- Achieved a score of 19.55/20 overall.
- Optional modules undertook: Spanish and Latin.

## EXPERIENCE

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### Data Scientist Intern

6 months · Apr. 2022 - Sep. 2022

*Institut de Recherches Servier*

*Suresnes, FR*

- Carried out work as part of the JUMP-Cell Painting Consortium of the Broad Institute of Harvard and MIT. This Consortium is creating a new data-driven approach to drug discovery based on cellular imaging, image analysis, and high dimensional data analytics. It aims at making cell images as computable as genomes and transcriptomes.
- Developed a CLI program in Python to perform Quality Control tasks on the collected cell-painting images. This program was later made open-source and I am still the main active contributor.
- Developed a GUI tool in Python to allow the team to explore new aspects of their high dimensional data. In particular, this tool relied on dimensionality reduction algorithms (UMAP, t-SNE) to extract meaningful information from an SQLite database.

### Full-stack and Cloud Developer Intern

3 months · Jul. 2021 - Sep. 2021

*UniVerse*

*Remote*

- Served as a Full Stack and Cloud Developer to build an application for Android, iOS and Web.
- Worked on both front and back-end components of the app, as well as on the design of the databases and DevOps.
- Programmed in Dart using the Flutter framework, with integration of Google Firebase services.
- Researched and produced reports on technologies that the company wished to adopt.
- Worked under the guidance of the company's CTO and also independently, relying on both my communication and team-working skills, as well as my autonomy.

### Multi-skilled Crew Member

1 month · Aug. 2020 - Sep. 2020

*McDonald's*

*Les Ulis, FR*

- Challenged my team working skills and communication to achieve high-efficiency standards (e.g. following instructions, preparing products, assembling orders, and helping customers).
- Required a high level of autonomy, independence and organization (e.g. taking orders, cleaning, and maintenance).

## Summer Student

2 weeks · July 2018

*University of Cambridge*

*Cambridge, UK*

- Took part in a course oversea about emerging technologies (AR & VR, Data processing, Voice recognition, Artificial Intelligence, etc.). Wrote several essays and delivered team presentations.
- Developed my collaboration and communication skills, as well as my organization skills.

## PROJECTS

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### Mars Rover - *MEng Year 2 Project* | C++, Arduino, ESP32 SoC

June 2021

- Programmed an ESP32 SoC in Arduino C++ to communicate with 3 sub-systems.
- Used the MQTT protocol to communicate with a Web-App over WiFi to control the rover.
- Handled communications using the UART Protocol to both an FPGA (computer vision) and an Arduino Nano board (motors).
- Designed custom instruction sets to decode and interpret all commands from all sub-systems.
- Implemented a custom obstacle-avoidance system triggered by external sensors.
- High team-working skills and excellent communication were required to successfully coordinate with my 5 coworkers.

### Circuit Simulator - *MEng Year 1 Project* | C++, MatLab, Git/GitHub

June 2020

- Developed a program in C++ to analyse complex electrical circuits (similarly to LTSpice).
- Coded the electrical behaviour of all supported components and used Matrix computation to solve for voltages and currents at each instant of the transient analysis.
- Used Git/GitHub to collaborate between team members.
- Plotted the results of our simulator using MatLab and wrote a detailed report of our project to record our organization and reasoning throughout the project.
- Accurate, efficient and creative coding, as well as high team-working skills and collaboration were required in order to deliver a complete product.

## TECHNICAL SKILLS

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**Natural Languages:** English (bilingual), French (native), German, Spanish

**Programming Languages:** Python, Dart, C/C++, Julia, F#, MatLab, Lua, Prolog, SystemVerilog

**Tools:** Git, Docker, Flutter, ROS, Visual Studio, AdobeXD, Quartus, LTSpice, LaTeX

## OTHER ACHIEVEMENTS AND INTERESTS

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**Licenses and certifications:** Driving License, TOEFL

**Participations in numerous national challenges:** Kangaroo Challenge (Maths), "Animath" (Maths), "Concours Castor Informatique" (Programming), "Algoréa" (Programming).

### Sports and Societies:

- Education Officer of the Imperial College French Society (last year)
- Running
- Rowing - as part of the Imperial Boat Club
- Sailing (every summer)

**Other interests:** Photography, Digital Design, Drawing and Painting.

*References available upon request*