

Tanguy Perron

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

EDUCATION

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 & Deep 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 – Jul. 2019

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

EXPERIENCE

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., preparing products, assembling orders, and helping customers).
- Required a high level of autonomy, independence and organization (e.g., taking orders, cleaning, and maintenance).

PROJECTS

Computer vision for zero-waste food containers - *MEng FYP* | *Python* Oct. 2022 - Jun. 2023

- Final Year Project for my Electronic and Information Engineering MEng degree. This project dealt with the implementation of a smart return kiosk for reusable coffee cups.
- Multiple software systems relying on external sensors were implemented in Python and integrated on a Raspberry Pi to ensure an efficient product robust to adversaries.
- Benchmarked 3 families of object detection architectures trained on a custom dataset.
- Designed and implemented a custom object tracking algorithm based on motion detection.
- Challenged all skills that I had acquired throughout my degree, ranging from hardware communication protocols to state-of-the-art machine learning models for object detection, all while deepening my understanding of embedded systems and their limitations.

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.
- 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

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

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 (2021-2022)
- Running & Sailing

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

References available upon request