Michael Morris

Machine learning PhD graduate with expertise in control and
uncertainty modelling.

Nationality:	British, with Swiss work permit	Avenue du Rond-Point 3
Date of Birth:	29.10.1995	1006
Email:	m.morris95@protonmail.com	Lausanne
Phone:	+41 76 226 94 74	Vaud
Website:	https://www.michaelmorrisengineering.com	

Education

University College London: PhD in Machine Learning   2019-2024
- Thesis title: Forecasting infectious disease prevalence with associated uncertainty using neural networks.
- Paper accepted at PLOS Computational Biology: "Neural network models for influenza forecasting with associated uncertainty using Web search activity trends"

University of Bath: Integrated Mechanical and Electrical Engineering, MEng 1st   2014-2019
- Dissertation – Deep Reinforcement Learning for UAV Control.

Experience

University College London, Researcher   2020-2024
- Built Bayesian and physics-informed neural networks for forecasting. With a strong focus on uncertainty quantification and interpretability, both critical in decision making systems.
- Published a state of the art results forecasting model for influenza-like-illness in the United States.
- Supervised Machine Learning master's students through their final year projects on: Bayesian optimisation, uncertainty modelling, and deep learning, key areas in real-world AI applications.
- Lead tutorials on advanced ML techniques, relevant for robotics control and planning.

Team Bath Drones Research, Researcher   2018-2021
- Designed a novel path planning algorithm and won ERL SciRoc 2019 competition for indoor multirotor collision avoidance.
- Won SESAR special prize at European Robotics League (ERL) Emergencies competition in Seville 2019 for a computer vision based collision avoidance system on a multirotor.
- Developed an AI based target recognition and geolocation system for UAVs, winning a design award at the IMechE UAS Challenge 2019.

Celsius Sports, Founder   2022-Present
- Cofounder of a sportswear company, working part time alongside my PhD.
- Built relationships with suppliers and local sports club leaders. I have learnt communication skills, design, planning as well as the ins and outs of running a small business.

Proserv, Intern   2016-2017
- Identified inefficiencies in internal processes, presented recommendations for improvements and implementing change across multiple departments to senior management.
- Created bids for control systems, including design, specification, hours allocation and pricing.
- Rotated through all departments, including manufacture, electrical/mechanical engineering, bids, project management, and participated in the 2018 business planning.

National Physical Laboratory (NPL), Intern   07/2015 - 09/2015, 12/2015
- Designed a method for calibrating material testing devices using embedded metals in 3D prints.
- Completed experiments for composite recycling, and measurement of thermal properties of materials.

Skills

IT/ Programming
Programming Languages:	C++, Python, MATLAB, C, Linux, R.
ML tools and packages:	TensorFlow, PyTorch, Keras, Scikit-Learn, OpenCV, Pandas, REST API.
Common software:	Microsoft Office, Adobe Illustrator/Indesign/Premiere Pro.
CAD packages:	Various, including Solidworks, Onshape, Fusion360.

Languages
English:	Fluent, native language.
French	A2, Swiss French School, Lausanne.

Activities and interests
- Passionate about sports and cycle and run several times a week with local clubs.
- Designing and building, e.g: 3D printer, a robotic spider, drones (fixed wing and multirotor), rockets.
- I enjoy working with diverse people from different cultures, having previously lived in Egypt and the UK.