Camille Mitchell

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Born the 25.05.1997
Single
Nationality: Swiss and U.S.A.

Education

2018-Present **EPFL** MSc. in Life Sciences Engineering, minor in Neuroprosthetics

- Courses include: neuroscience – molecular mechanisms and disease, cellular and circuit mechanisms, behaviour and cognition, biomaterials, flexible bioelectronics, brain-computer interaction, data analysis and machine learning
- Awarded a student **Bertarelli Fellowship** in Translational Neuroscience (2019-2020)

2015 - 2018 **EPFL** BSc. in Life Sciences and Technology

- Courses include: physiology and anatomy, immunology, biomedical equipment, fluid mechanics, circuit analysis, probability and statistics, physics, programming
- Third year abroad in the **University of British Columbia**

2013 - 2015 **International School of Haut-Lac** Bilingual International Baccalaureate

- Higher Levels included Mathematics, Chemistry and Biology

Research experiences

2019 **Project in Neuroprosthetics**

- Laboratory for Soft Bioelectronic Interface, held by Professor Stéphanie Lacour
- Fabricating and characterizing stretchable neural implants with integrated stiff electronic chips, allowing higher signal-to-noise ratio and multiplexing
- Design and fabrication of multi-layer electrode implants to record spreading depolarization in patients with Traumatic Brain Injury

2018-2019 **Research projects in Master courses**

- Create a brain-computer interface to adapt the difficulty of a task by creating a decoder of EEG signals
- The hypothetical design of a scaffold for optic nerve regeneration in the context of the course on biomaterials
- The hypothetical design of a novel deep brain stimulator for epileptic patients in the course on flexible bioelectronics

2018 **Internship in a pharmaceutical industry, UCB Pharma, Slough, UK**

- As part of the characterization group in the development process of pharmaceuticals
- Main project: assessing the feasibility of using ligand affinity chromatography to identify critical quality attributes in biological therapeutics
- Experience with high-pressure liquid chromatography (HPLC), mass spectrometer (MS), biologics stability screening platform (UNcle), and programming a robot for automatic HPLC-MS sample preparation

2018 **Research project at the University of British Columbia, Vancouver, Canada**

- Publication in Journal of Experimental Microbiology and Immunology (JEMI): "Assessing the contributions of the multidrug efflux pump components *acrE* and *acrA* in mediating resistance to kanamycin in *E. coli BW25113*: steps towards the generation of *acrA/acrE* double mutants using CRISPR/Cas9 system"

2017 **Internship in an academic research laboratory (EPFL), Lausanne, Switzerland**

- Laboratory of Metabolic Signaling, held by Professor Kristina Schoonjans
- The project focused on studying the key players involved in non-shivering thermogenesis, using mice as model organism

Extracurricular activities

2015-Present **Tutor for the International Baccalaureate as part of Elite IB Tutors**

- Weekly 1-2h sessions tutoring students privately
- Experience tutoring Chemistry and Mathematics

2005-Present **Piano and music theory** – Conservatoire de Vevey

2015-Present **Distance running** – 20km of Lausanne, Lausanne half-marathon

2015-2016 **Event organiser** – as part of the Life Science association at EPFL

2014 **International Award (Gold)** – Mountain hiking for four days, and self-sufficiency

Languages

- French, mother tongue
- English, mother tongue
- German, Goethe B1 level

Programming skills

- Matlab – used in numerical analysis, data analysis, machine learning, signal processing and creating a decoder for brain-computer interface
- C++ – object-oriented programming, experience programming a project to model the interaction of bees and their beehives.
- Python (Jupyter) – used in applied data analysis, machine learning
- Experience with Java, LaTeX