

Gauthier PELLEGRIN

Engineer in Applied Physics

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12/09/1990 (27 y/o)
French
Single

Strengths:

- Good knowledge in wearable and medical devices
- Physics/Mathematics and engineer background
- Flexibility/adaptability

Education

Aug 2012 - Jan 2015 **Master in Applied Physics**, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
Sept 2008 - Aug 2012 **Bachelor in Physics**, EPFL

Experience

March 2016 - present **R&D engineer** - Digital for Mental Health, Palaiseau, France

- In charge of the device and hardware development (technical and functional specifications, etc.), subcontractors supervision for development and prototyping and production
- Involvement in the Quality Assurance, Risk Management and Product Documentation for medical trials
- Development and validation of methods and procedures for big data extraction and handling, implementation of HMI for data visualisation tools for internal use (Python)
- Test of prototypes provided by subcontractors (sensors characterisation, etc.)
- Technology watch (wearables, medical devices, physiological signal processing algorithms)

Feb 2015 - July 2015 **Scientist intern** - Swiss Plasma Center, Lausanne, Suisse

- Development and qualification of an optical test bench for millimetre/terahertz wave systems
- Implementation of the extraction algorithms, calculation methods and data analysis (Matlab, LabVIEW)
- Test and validation of the setup and the methods implemented
- Analysis/characterisation of various RF/HF systems (electronic components, dielectric materials)
- Technical documentation and test reports drawing

Jan 2014 - Aug 2014 **Technical engineer, intern** - Cicorel SA (certified ISO 9001, ISO 14001), Boudry, Switzerland

- Production process of printed circuit boards, and lamination process of multilayer PCBs
- Analysis and validation of new lamination materials, study of the financial viability for use in production line, test and characterization of new prototypes
- Development of analysis applications (VBA, Excel) for production monitoring
- Technical documentation drawing

Jan 2012 - Dec 2013 **Assistant** for Physics exercises sessions and practical works - EPFL, Lausanne, Suisse

Summers 2009-10-12-13 **Administrative assistant** in the Legal and Technology departments - Cotecna Inspection SA, Geneva, Suisse

Professional Skills

Technical	Wearables, Medical Devices, IoT Notions in Quality Assurance, Risk Analysis and Management (FMEA), biocompatibility requirements Familiar with medical device reglementation: ISO 13485, ISO 10993-1, ISO 14971, ISO 15223-1
Programming Languages	Python, C++, Matlab, LabVIEW, VBA, Java, HTML (basics)
Development Tools	PyCharm, Android Studio, Eclipse, MPLAB (basics), Visual Studio (basics)
Design and electronic	Arduino, KiCad, Eagle (notions), Autodesk Fusion 360, Tinkercad
Instruments	Vector network analyser, spectrum analyser, oscilloscope, bolometer, frequency counter, heterodyne systems, 3D printers (Ultimaker, Up printer)
Sciences	Bioengineering, signal processing, microwave/terahertz systems, electromagnetism, metrology, optics
Operating systems	Linux (Ubuntu, Red Hat), Windows
Miscellaneous	LaTeX, MS Office (Word, Excel), Inkscape

Projects

Master project (6 months)	Development of hardware and analysis techniques for millimetre wave, components characterisation for diagnostic purposes on TCV (Tokamak à Configuration Variable)
Semester project (1 year)	Calibration of Electron Cyclotron Emission (ECE) radiometer, transmission line tests for TCV and analysis of plasma discharges data

Languages

Native	French
Advanced	English

Extra-curricular activities

Bouldering, rock-climbing, travelling (Europe, Japan, China, Ireland, Scotland, Bali), reading (scientific magazines, SF romans)