O d a y D a r w i c h

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Computer Scientist, Research & Innovation Engineer with various experiences in design, innovation and conceptualization. Most of my work is at the overlap of innovation/deep tech. *I believe that we are essentially social creatures and we achieve our greatest aspirations when we work together, not as individuals*

Diverse Placements: I performed technical software developments in areas including:

Optimization Algorithm Data Analysis, RDBMS	Software development life cycle, Scrum, Lean	Conceptualization Modeling	Full Stack Development

Professional Experience

European Council for Nuclear Research (CERN) - **IdeaSquare** 📍 Geneva, Jan 2018 - Present
Design & Innovation Engineer in Deep Tech - Researcher & Serial Learner
⊙ **Research & Innovation Development:** Designed a novel solution, called *New Alexandria* for collaborative documentation of breakthrough innovations using Distributed Ledger Technology, ML & Graph Search Algorithms
⊙ **Collaboration Establishment:** Established different collaboration with NGOs, Corporations and International organizations, of which a collaboration between Akasha Foundation and CERN IdeaSquare for a €1 million grant
⊙ **Design and Facilitation Support:** Designed, organized and facilitated senior international workshop using collective intelligence and design thinking tools
⊙ **Business intelligence analysis:** Co-designed and engineered a 5 year strategy for CERN IdeaSquare

University of Geneva-/-**Citizen CyberLab** 📍 Geneva, Switzerland, 2017 to 2019, 35%
Reseaerch Assistant and Program Coordinator
⊙ **Research and Assessment:** Assessed & Researched more than 15 online existing documentation platform and surveyed users experiences to find the best way to docuemnt online
⊙ **Reporting & Analysis:** Produced a research investigation report and recommendations for future development
⊙ **Software Development:** Adapted a collaborative online documentation platform from MIT called SDGinProgress. Programmed and maintained the code in `Ruby on Rails, jQuery, JavaScript, PostgresSQL, solr search engine`

eResearch Technology, Inc. 📍 Geneva, Switzerland, 2016 to 2017, 50%
Junior Software Developer and Project Manager Assistant
⊙ **Testing, Analysis and Concept Engineering:** Tested, Analysed and reviewed the existing `Excel` VBA solutio. I also framed the project, collected and the data, & selected actions based on user needs & preferences
⊙ **Software Development and Team Management:** Build an automatized web app system (MVP) in collaboration with 2 full stack developers; tested it with users and reported future recommendation for further development. MVP was build using `Functional Design, UML Modeling, Macro VBA, Python, Django, MySQL, HTML, CSS, JS`

World Economic Forum 📍 Geneva, Switzerland, Mar 2016 to June 2016, 40%
Data Migration Engineer
⊙ **Software Development:** Developed and resolved the backup. I restored the data from old system and did the data migration for the new iOS system using the following technologies: `Python, MySQL, OS, MS-Office, ATOM IDE`

VINCI Energies 📍 Geneva, Switzerland, Mar 2013 to Aug 2013, Thesis Project
Junior Technical Project Manager
⊙ **Concept Engineering:** Researched and well-conceptualized an Internal Enterprise Content Management web app system that replaced Lotus. I collaborated with a team of full stack web developers to develop the solution. I tested it and created a user friendly tutorials for more than 80 users. I used for the latter, `VB.net, Jira and SmartSheet`

Software Development Skills: Cloud Platform (AWS), Data Structure and Algorithm, Git, Emacs, UNIX, Scrum, Lean
Problem Solving Skills: Interpersonal skills, Design thinking & collective intelligence practices, Lobbying, Leadership
Computer programming and coding: Python, Ruby on Rails, JavaScript, C#.Net, ASP.net, MySql, PostgresSQL, HTML, CSS, JavaScript, jQuery, Django, Telerik, Jira, BugTracker, VBA, UML, Matlab, Haskell*, Emacs, Atom IDE, Visual Studio

Education

University of Geneva, M.Sc. Computer Science ⚲ Geneva, Switzerland, Nov. 2018
⊙ <u>Specialties</u>: Algorithms and Parallel Computing, Stochastic Information Processing, Semantics, Modeling & Verification, Theoretical Computer Science, Machine Learning, Data Mining and Information Retrieval
⊙ <u>Research & Development</u>: Submitted a thesis on *Comparing Digital Platforms for Challenge-based Learning*

University of the Littoral Opal Coast, M.Sc. Electrical Engineering ⚲ Lille, France, Aug. 2014
⊙ <u>Specialties</u>: Digital electronics, , Optoelectronics, Electromechanics, Electromagnetism

University of the Littoral Opal Coast, M.Sc. Industrial Information Technology ⚲ Lille, France, Aug. 2013
⊙ <u>Specialties</u>: Industrial data processing, Predictive analytics, modelling, Signal & Image Processing

Lebanese University, B.Sc. Computer & Communicat° Networks Engineering ⚲ Beirut, Lebanon, Aug. 2012
⊙ <u>Research</u>: Submitted a thesis on *Simulation by cellular automata for natural risk management*

Entrepreneurial Experiences₂₀₁₇ to 2019

Founder of **The Quantum FutureX Initiative**
⋈ QFX is an open initiative for forward-thinking people to step forward and collaborate on creating the futures of quantum. It brings hardcore scientists, creatives and industry members to work together on high risk, high reward projects
❋ **Established** collaborations with IBM, Alphabet (Google X), CERN, EPFL, ITU, State of Geneva. **Onboarded** more top people for the board of the association from Europe and the US and **Raised multiple funding** for QFX

Founder of **The Mobility Hackathon Community**
❋ **Established** collaborations with CERN, Univeristy of Geneva, ABA foundation, ITU, Ai4Good Summit. **Onboarded** more top people for the Jury from various industry and research labs and **Raised funding**

Initiated a collaboration for New Alexandria, € 1 Million EU project ⧉

Organizer of Physics Meets Blockchain Workshop for open source development & blockchain at CERN⧉

Chairmen and Organizer of *Beyond Quantum Technologies & AI panel at AI4Good Summit* ⧉

Consultant for ITU ⧉ on Innovation in Quantum Tech.. I submitted reports & recommendation ⧉ QT Group

Consultant for the U.S. Mission to the UN ⧉ on the organization and setting up a world wide Hackathon ⧉

Public Speaking Engagements

The Quantum Future, Innovation and Community
The International Telecommunication Union⧉ workshop on Quantum Information Technology ⚲ Shanghai, China, 2019

CERN Quantum Initiative & Vision for Blockchain for Open Innovation
Aarhus University, Department of Physics and Astronomy ⧉, private talk for senior researchers ⚲ Aarhus, Denmark, 2019

Future Emerging Technologies
Table Unstable KYOTO SCIENCE OUTREACH ⧉ workshop on Quantum Computers & Blockchain ⚲ Tokyo, Japan, 2018

Community Activities

2015 - Present : Geneva Debate Club ⧉
2018 - Present : CERN Entrepreneurship Meetups ⧉
2016 - 2018   : Swiss Cyber-Security meetup ⧉

<u>Operating Systems:</u> Debian GNU/Linux, Windows, macOS

References: Prof. John Ellis ⧉ , Dr. Markus Nordberg ⧉ , Dr. François Grey ⧉ , Dr. Ben Segal ⧉

MOOC & Recent Learning

Learning: MIT Quantum Information Science I, II ⧉
Reading: InvestED ⧉ , Quantum Computations and Quantum Information ⧉ , How to Design Programs ⧉

<u>Trilingual:</u> French, English and Arabic