Francesco Alotto
Biomedical Engineer, Deep Learning&IoT Specialist, AR&VR developer

• Date of Birth: 29/08/1994 • Email: franalotto94@gmail.com • Mobile: +39 388 349 38 35

Summary

As a Data Analytics and Machine Learning Engineer with over two years of experience, I have contributed to the production and commercialization of innovative services based on TELCO data. My responsibilities have included leading the development of internal IT script libraries, designing and implementing machine learning models, serving as co-responsible for successful project engineering architectures, supporting the sales department in presenting new solutions, and producing analysis and dashboards using BI platforms. In addition to my experience in this role, I have also served as a Senior Machine Learning Engineer, Adjunct Professor, and Research Fellow, where I have led and contributed to a number of key projects, including the development of prototypes for neuro cognitive disorders and hands rehabilitation. Bonus: some say I'm a fun presence in open space offices.

Experience

Olivetti (part of TIM Group)
Ivrea&Milan, Italy

Data Analytics and Machine Learning — *Jan '21 - On going*

As a Data Analytics and Machine Learning Engineer, I have been involved in the production and commercialization of innovative services based on TELCO data (over 300 trillion data points per day). My main responsibilities include:

- Leading the development of internal IT script libraries for the automation of data extraction, transformation, and loading from the TIM Network API consumer traffic data) using a variety of programming languages and frameworks, including Python, bash, Ruby, Java, and JavaScript, which serve as the foundation for all data software offered to customers by Olivetti.
- Designing and implementing production ready machine learning models for telco domain applications, including natural language processing, computer vision, and predictive analytics.
- Serving as co-responsible for the engineering architecture of the successful TIM City Point service, which has been adopted by a lot of Italian public administrations.
- Supporting the sales department in presenting the engineering of new ML-IoT solutions to potential customers.
- Producing analysis and responsive dashboards using BI platforms such as Qliksense and Graphana for use in a smart control room.

Ericsson
Naples, Italy

Software Engineer- Data and AI Specialist — *Aug '20 –Jan '21*

As a Senior Machine Learning Engineer, I worked on the construction of the last generation Mobile Network Performance Dashboards for the most influent TELCO companies, leaning on Ericsson antennas. Reporting to the Head of Digital Architectures, my responsibilities included:

- Designing and implementing machine learning models for bandwith and transmission predictive analysis.
- Working with cross-functional teams to understand business needs and translate them into machine learning solutions.
- Conducting research to stay up-to-date on the latest advancements in machine learning and apply them to current and future projects.
- Mentoring and providing technical guidance to junior machine learning engineers.
- Communicating findings and technical decisions to both technical and non-technical stakeholders.

Università Cattolica del Sacro Cuore
Moncrivello, Italy

Adjunct Professor — *Feb '20 –Aug '20*

As an Adjunct Professor from February to August 2020, my responsibilities included:

- Instructing a class of 40 students in the Occupational Therapy program attending Università Cattolica del Sacro Cuore.
- Introducing students to topics in information technology, including VBA coding, computer architecture, and the application of artificial intelligence in medicine.
- Developing a comprehensive syllabus and course materials to support my teaching.Complete Syllabus and Courses' Material.

Polytechnic of Turin
Turin, Italy

Research Fellow - Advanced VAR Technologies for neuro cognitive disorders — *Jun '19 –Jun '20*

As a Research Fellow focused on advanced technologies for neuro cognitive disorders, I led and contributed to a number of key projects from June 2019 to June 2020. My focus was on developing prototypes that intersected patients' needs with novel approaches and advanced computer technologies, with the goal of creating disruptive solutions that could have a significant impact on society. During this time, my responsibilities included:

- Leading the development of the SAM4Vision project, a 4.0 visual communicator for ALS patients, which was awarded a 50k€ grant for proof of concept development and has been patented (Patent 102021000010415). This involved guiding a team of engineers in the development of hardware and software components, as well as conducting user testing with ALS patients to gather feedback and refine the design.
- Serving as Principal Engineer for a VR software for hands rehabilitation using sensorized gloves, which was selected as an eligible technology for medical use. I led the design and development of the hardware and software components and conducted user testing to collect data on the efficacy of the system.

- Working as Technical Scientist on the development of a brain deterioration measurement system that used machine learning techniques to predict and adapt to changes in brain performance in ALS patients. I was responsible for designing and implementing the machine learning algorithms and collecting and analyzing data from assistive software used by ALS patients.

*Smart Advanced Modeling for Vision

Other Experiences & minor: MILAN&TURIN, ITALY

Freelance Software Developer - Mobile apps @ Fiverr   *jun '20–jan '22*

Junior IT Project Manager @ MYLAN N.V. (now Viatris)   *Oct '18–May '19*

Please refer to my Linkedin profile and to my Portfolio for the complete list of work experiences.

Education

Polytechnic of Turin   TURIN, ITALY

Post Graduate Master in Smart Product Design 4.0   *2021-2023*

The Post Graduate Master in Smart Product Design 4.0 is aimed at training graduate engineers who intend to deepen the issues relating to technologies and methodologies for the conception and development of smart products.

Polytechnic of Milan   MILAN, ITALY

Higher Level Master in Deep Learning, Computer Science Engineering   *2019*

Deep Learning Methodology to build and optimize Industrial performances. Modules include: Statistics, Machine Learning, Unsupervised Learning, OPEN CV, Recurrent NN, Graph Networks and NLP. Different technical frameworks have been used: *Pytorch, Tensorflow, Keras, SciKitLearn*

Polytechnic of Turin   TURIN, ITALY

Master of Science in Biomedical Engineering- Clinical Informatics Specialization   *2016 – 2019*

Relevant modules include: Design of artificial organs, e-Health (Design of medical software, Bioinformatics), Computer Science (Internet of Things Programming, Machine Learning, Medical image processing), Electronics (Measurements and sensors for Bioengineering). **Score: 109/110**

Older: ITALY

Bachelor of Science in Biomedical Engineering   *2013 – 2016*

Scientific High School Diploma   *2013*

Patents: *SAM4Vision: 4.0 Visual Communicator* (Patent 102021000010415)

Publications:

- *Alotto Francesco et al. "Human Fragilities Supported by the Digital Social World." Handbook of Research on Implementing Digital Reality and Interactive Technologies to Achieve Society 5.0, edited by Francesca Maria Ugliotti and Anna Osello, IGI Global, 2022, pp. 596-619. https://doi.org/10.4018/978-1-6684-4854-0.ch025;*

- *Scidà, I. , Alotto, F. , Osello, A. (2020). 'A Methodology to Virtualize Technical Engineering Laboratories: MastrLAB-VR '. World Academy of Science, Engineering and Technology, Open Science Index 162, International Journal of Civil and Architectural Engineering, 14(6), 175 - 184;*

- *F. Alotto, I. Scidà, A. Osello (2020) BUILDING MODELING WITH ARTIFICIAL INTELLIGENCE AND SPEECH RECOGNITION FOR LEARNING PURPOSE, EDULEARN20 Proceedings, pp. 5866-5875.;*

- *Osello, Anna Alotto, Francesco. (2020). New Frontiers for the Teaching of Technical Drawing.Is it Possible to Design with Voice Interfaces?. 10.3280/oa-548.41. ;*

Programming Skills &tools: Java, Python, Go, C#, typescript, SQL and NO-SQL DB, qlik sense, graphana, React Native, Flutter, figma

Natural languages: Italian, English (*full professional proficiency*), French (*limited working proficiency*).

Qualification: State exam for Engineering practice qualification

Like to know more? Contact Me

---

[1]In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.