# europass

Curriculum vitae

| | |
|---|---|
| PERSONAL INFORMATION | **Federico Minutoli** |

📍 Via Napoli 44, 16134 Genoa (Italy)

✉ fede97.minutoli@gmail.com

🖱 https://defminutoli.netlify.app/

 https://github.com/DiTo97

Gender Male | Date of birth May 31, 1997 | Nationality Italian

## LEVEL OF EDUCATION    Bachelor's degree in Computer Engineering

*"The changes are so profound in the 2000s that, from the perspective of human history, there has never been a time of greater promise or potential peril." – **Klaus Schwab***

## WORK EXPERIENCE

**06/2021 – Present**    **AI research engineer**

Location    Pokèmon BP team

Development of FSAI, an AlphaGo-inspired AI for parallel 2-player game-playing within partially observable environments to adapt the core logic to play Pokèmon's official VGC e-sport.

**03/2021 – 09/2021**    **Intern**

Location    SEASTEMA, Genoa, Italy

Internship at SEASTEMA, a Fincantieri group company, for the drafting of the MSc thesis on 360° LiDAR and multi-view RGB cameras data fusion in the context of the MARIN project.

**02/2019 – 03/2019**    **Android developer**

Location    Mectron S.p.A, Carasco, Italy

Implementation and development of a demo Android app to showcase at the IDS dental fair in Cologne, Germany, the IoT potential of the ESP32 chips mounted on Micropiezo devices.
I also had to analyze their data acquisition and LAN connection capabilities.

**01/2019 – 02/2019**    **Consultant**

Location    CT Solution SNC, Genoa, Italy

CT Solution consultant for the porting of the company Digithera's distributed back-end architecture on CodeIgniter + Magento to new proprietary servers. I also had to analyze the overall SOA architecture to improve the quality of the sales and support services that Digithera provides to its customers on the electronic invoicing market (eIM).

## EDUCATION AND TRAINING

**09/2019 – Present**    **Master's degree in Computer Science**

Location    University of Genoa, Genoa, Italy

Track    Artificial Intelligence and Data Engineering

Grade    110/110 with honors[1]

Thesis    *360° LiDAR and Multi-view RGB Cameras Online Data Fusion for Depth Completion and 3D Texture Mapping on Unmanned Surface Vehicles.* (Advisor: Prof. F. Odone).

**03/2020 – 02/2021**    **Adotta un talento**

---

[1]Final examination pending.

Location     DIH Liguria, Genoa, Italy

Scholarship offered by Digital Innovation Hub Liguria and Confindustria to promote a tighter collaboration between the University of Genoa and some of the major companies in Liguria. It comprises a teaching pathway complementary to the academic career.

## 09/2019 – 12/2019     Academy of ZenHack

Location     University of Genoa, Genoa, Italy

Introductory programme in preparation for CTF hacking competitions.

## 09/2015[2]– 10/2019     Bachelor's degree in Computer Engineering

Location     University of Genoa, Genoa, Italy

Grade        103/110

Thesis       *DrinkItApp*. (Advisor: Prof. A. Merlo).

Alcohol abuse results in physical harm and mental malfunction and is responsible for 1 in 10 deaths among adults aged 20-64 years in most Western countries annually, resulting in a grand total of almost 90.000 individuals in the United States alone. Moreover, binge drinking (a dangerous habit defined as 4 or more drinks for women on a single occasion, and 5 or more drinks for men on a single occasion) has been steadily on the rise among youngsters. Between 2014 and 2017, over a third of college students aged 18-20 reported binge drinking in the prior month. Even though it's well known that alcohol impairs driving ability, many people still frequently drive when drunk. In 2010, 47.2% of pedestrian fatalities and 39.9% of vehicle occupant fatalities were caused by drunk driving. However, in many driving under the influence (DUI) cases, drivers are not even aware that they are over the legal driving limit.

Alcohol consumption raises the blood alcohol content (BAC) of drinkers, impacting their neuromotor and cognitive functions approximately 20 minutes after ingestion. The BAC level measures the amount of alcohol in the bloodstream, therefore travelling through the body to every organ up to the CNS system. In its simplest form, calculating a person's BAC level is based on how much alcohol went into what kind of body over how much time. Still much needs to be done to raise awareness on the risks that alcohol abuse still poses in the late 2010s and why self-monitoring is a crucial step in all kinds of DUI prevention.

DrinkItApp is an Android app which settles in the utility market sector. It has proprietary Node.js backend interacting with Firebase cloud services, for monitoring the BAC in peoples' body following a daily diary paradigm. It is enriched with functionalities aimed at preventing damage to them, such as a *Reflex mini-game* and the possibility to call at any time emergency and mobility services nearby through GPS (i.e., Uber, ambulance). It implements a renewal of E. Widmark's original regression analysis for BAC estimation from the 1930s, which set the foundations for today's research in alcohol analysis and toxicology, as described in D. Posey and A. Mozayani, The Estimation of Blood Alcohol Concentration, 2007.

## 06/2016 – 07/2016     Robo-weeks

Location     AIMS Lab, Genoa, Italy

Introductory programme in preparation for the Bachelor's degree in Computer Engineering.

## 09/2010 – 07/2015     High school diploma

Location     Liceo scientifico Leonardo da Vinci, Genoa, Italy

Grade        82/100

Thesis       *Selfie-mania: Teachings from the 1800s*.

Short article on the wide-spread *Selfie-mania* phenomenon with a focus on its references in Italian art and English literature (i.e., Dorian Gray's portrait) and its historical predecessors dating back to the very first one taken on slab in 1839.

---

[2]Did not start until a.y. 2016-17.

## PERSONAL SKILLS

**Mother tongue**  Italian

**Other languages**

| UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|
| Listening | Reading | Spoken interaction | Spoken production | |
| C1 | C2 | C1 | C1 | C1 |
| Cambridge English: Advanced (CAE) certificate C1[3] | | | | |
| A2 | A2 | A1 | A2 | A1 |

English (rows 3–4), French (row 5).

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

**Communication skills**

– ***Team work*** – I have played basketball for almost ten years at a high youth level (Italian U18 nationals in the 2013-14 season), whilst also being the captain for the latter three.

– ***Mediating skills*** – I have coached for over one year the U16 trainees in the youth program of the last basketball team I played for, and in turn I learnt how to deal with young teenagers that might not be that willing to listen to a managerial figure.

**Organisational skills**

While pursuing my MSc at UniGe I took part as a mentor at the *Slow Rogaining* activity entitled as guidance towards the choice of a DIBRIS faculty for a few last-year high school students; being a mentor I had to organize a group activity related to STEM subjects that obliged those guys to split into mixed groups and cooperate with one another.

**Digital skills**

– Algorithm design and analysis
– Data structures
– Databases: SQL and noSQL
– Programming languages (1° class): Python, C++, and C
– Programming languages (2° class): PHP, JS, and Java

– Cross-platform frameworks: Flutter
– Distributed systems: Spark
– Mobile platforms: Android
– Hardware platforms: Arduino
– Web frameworks: Laravel

– Microsoft Office suite
– OS familiarity: Linux and Windows
– Shell scripting, CLI and Git

**Knowledge**

– Computational neuroscience
– Computational vision
– Control systems
– Linear algebra
– Machine learning
– Modern physics
– Multi-agent systems
– Multi-modal fusion
– Statistics

**Hobbies**

I like to travel to new places, experience different cultures and visit famous art galleries or museums whenever I have the chance to. I am deeply in love with sports, with no distinction, and as of late I have discovered the beauty of podcasts, scientific journals and interviews.

**Driving licence**  A2, B

---

[3] Printed paper pending.

## ADDITIONAL INFORMATION

**Desired job**

AI research engineer.

**Professional objective**

To be part of the change that will lead to the 4th Industrial Revolution, taking advantage of the technological progress in different areas of daily interest. I would like to focus on the ethicality of *human vs AI intelligence*, recognizing that there is no AI without any form of Mankind, towards a more productive, sustainable and secure future within everyone's reach.

**Intention to continue studies**

Doctoral studies.

**Honors and awards**

Winner of the national PhD in AI scholarship (37° cycle) led by the University of Pisa.

Winner of a 6-month-long Erasmus+ exchange scholarship at the EAISI, University of Technology, TU/e, Eindhoven, Netherlands, in a.y. 2020-21.[4]

Winner of the *Adotta un talento* scolarship in a.y. 2020-21.

Winner of the INFN scholarship for merit from a.y. 2016-17 to a.y. 2020-21.

Winner of the *Innovative solution* award set up by Avanade, and second place overall as a UniGe team, during the hackathon held at the AI-themed **C1A0** fair in Genoa on 14-15/11/2019 with focus on predictive analysis and forecasting of the day-ahead electricity market (MGP).

Second place overall in the final competition held at Robo-weeks with **LEGO robots** that had to play football on a specially textured table, after being trained to recognize the ball and the pitch through color matching of the table's unique palettes via ANNs.

**Publications**

F. Minutoli, G. Losapio, V. Mascardi and A. Ferrando, Smart Balancing of E-scooter Sharing Systems via Deep Reinforcement Learning, 2021.

**Conferences**

F. Minutoli, and G. Losapio (02-04/09/2021). Smart Balancing of E-scooter Sharing Systems via Deep Reinforcement Learning [Paper presentation]. WOA 2021, AIxIA, Bologna, Italy.

F. Minutoli, and G. Losapio (22-24/09/2021). Smart Balancing of E-scooter Sharing Systems via Deep Reinforcement Learning [Paper presentation]. I-CiTies 2021, UniSa, Virtual conf.

---

[4]Cancelled due to COVID travelling restrictions.