

ABOUT ME

University of Salento

2013 - 2016:

I started studying at the University of Salento in 2013 attending the course of study in Physics in the Faculty of Mathematics, Physics and Natural Sciences. In 2016, I moved on to attend the course of study in Information Engineering.

2016 - 2019 (Bachelor of Science):

I attended the Information Engineering course of study, completing it on 29 July 2019 with a grade of 97/110.

2019 - 2023 (Master of Science):

I attended the Computer Engineering course of study, completing it on 22 February 2023 with a grade of 105/110.

Tutor in mathematics and physics

For several years I have worked as a freelance tutor helping children attending middle school and coming from heterogeneous high schools. The main objective of the tutoring activity was to train the boys in the mathematics and physics disciplines in order to develop a method that would allow them to study at their best.

WORK EXPERIENCE

08/2014 - 09/2018 Lecce, Italy

tutor

The main objective of the tutoring activity was to support students in the mathematics and physics disciplines in developing a method that would enable them to study at their best.

EDUCATION AND TRAINING

09/2019 - 22/02/2023 Lecce, Italy

Master's Degree in Computer Engineering (grade: 105/110) U niversity of Salento, Department of Innovation Engineering

General:

1. Proficiency in Advanced Control Techniques
2. Proficiency in Big Data Management
3. Proficiency in Computer Vision
4. Proficiency in Decision Support System
5. Proficiency in High Performance Computing
6. Proficiency in Internet of Things
7. Proficiency in Network Technologies
8. Proficiency in Robotics
9. Proficiency in Sequential and Parallel Algorithms and Data Structures
10. Proficiency in Software Engineering
11. Proficiency in System and Network Programming

Address Lecce-Monteroni Street, Lecce, Italy | **Website** www.unisalento.it | **Field of study** Computer Engineering | **Final grade** 105/110 | **Thesis** Global downscaling of remotely sensed soil moisture retrievals using Machine Learning

10/2016 - 28/07/2019 Lecce, Italy

Bachelor's Degree in Information Engineering (grade: 97/110) University of Salento, Department of Innovation Engineering

General:

1. Proficiency in Fundamentals of Automation
2. Proficiency in Communications Fundamentals
3. Proficiency in Computer Networks
4. Proficiency in Mathematics and Physics
5. Proficiency in Probability Theory and Statistics
6. Proficiency in Software Design Principles
7. Proficiency in UNIX-Like Operating Systems

Address Lecce-Monteroni Street, Lecce, Italy | **Website** www.unisalento.it | **Field of study** Information and Communication Technologies | **Final grade** 97/110 | **Thesis** Design and development of the back-end sub-system for an event management service

08/2013 – 10/2016 Lecce, Italy

Bachelor's Degree in Physics (not graduated) University of Salento, Department of Mathematics and Physics "Ennio De Giorgi"

Generale:

1. Proficiency in Mathematics e Physics
2. Experience acquired during Physics Laboratory activities
3. Proficiency in leadership and team-work

Address Lecce-Monteroni Street, Lecce, Italy | **Website** www.unisalento.it | **Field of study** Physical sciences not further defined
| **Final grade** not graduated

08/2008 – 06/2013 Lecce, Italy

High School Diploma (grade: 73/100) Liceo Scientifico "Cosimo De Giorgi"

Address Michele De Pietro Street, 14, Lecce, Italy | **Website** <https://liceodegiorgi.edu.it> | **Final grade** 73/100

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

Other language(s):

English

Listening
B2

Reading
B2

Spoken production
B2

Spoken interaction
B2

Writing
B2

DIGITAL SKILLS

DOCUMENTS

Microsoft Word | Pages

PRESENTATIONS

Microsoft Powerpoint | Keynote

SPREADSHEETS

Microsoft Excel | Numbers

GENERAL SKILLS

Google Suite (Gmail, Google Drive, Google Slide, Google Sheets, Google Docs, Google Forms, Google) | LaTeX

SOFTWARE FOR NOTE-TAKING

Notion | Obsidian

PROJECT MANAGEMENT SOFTWARE

Trello for task management | Git for code versioning during team projects

ADDITIONAL INFORMATION

Driving Licence

Driving Licence: B 17/09/2015 – 13/07/2026

Communication and interpersonal skills

Communication and interpersonal skills

1. Good communication skills acquired as front-office manager at the Acaya Golf Club
2. Communication and interpersonal skills acquired as part of the participation in a panel of experts in the management of the scientific laboratory of the Faculty of Physics regarding the problems of electromagnetic fields
3. Communication skills acquired as an account manager operating in the management and control of various sector budgets at Salento Racing Team of the University of Salento
4. Communication and interpersonal skills acquired in managing the human resources of a team of six people as part of the Samsung Innovation Camp project at the University of Salento

Professional Goals

Work in Machine Learning, Computer Vision, Data Science, Big Data Management and Robotics

The main goal of my career is to apply what I have studied and increase my skills especially in Machine Learning, Computer Vision, Data Science, Big Data Management and Robotics. I believe that these disciplines are the future and are the best way to achieve goals that were previously considered unattainable. The application of these in the various fields of human knowledge can be the key to design and build a better future.

Professional Skills

APIs

1. API Google Maps Javascript
2. IOTA MAM (Masked Authenticated Messages)

3. OpenStreetMap Maps
4. Reverse Geocoding

Blockchain

1. IOTA
2. DLT (Distributed Ledger Technology)

Content Management System

- Drupal

Database

- MySQL
- MongoDB
- SQLite

Frameworks

- Angular
- Bootstrap
- Ionic
- Spring

Container Managers

1. Docker (basic setup and management)

Libraries

1. Cartopy
2. CDO
3. DoWhy
4. Keras
5. MPI/ MPICH
6. Numpy
7. NetCDF
8. Pandas
9. Pytorch
10. Scikit-Learn
11. Tensorflow

Markup Languages

1. HTML5
2. CSS

Programming Languages

1. AMPL
2. C
3. Java
4. Javascript
5. LaTeX
6. Python
7. Shell Bash
8. SQL
9. STRIPS
10. Typescript

General Skills

1. Analysis and design of feasible solutions for Computer Vision problems
2. CMS plugin development
3. Configuration of Cloud environments
4. Design of relational and non-relational databases
5. Design and implementation of Web and Mobile architectures
6. Design and implementation of Machine Learning pipelines in Python
7. Embedded systems
8. Management of Spring REST servers

Softwares and IDEs

1. BBEdit
2. Cisco Packet Tracer
3. CLion

4. Coppelia Sim
5. Docker
6. Eclipse
7. GitHub and git
8. Google Colab
9. IntelliJIdea
10. Jupyter Notebook
11. MySQL Workbench
12. Postman
13. PyCharm
14. Scene Builder
15. Spring Tool Suite
16. SQLite Studio
17. VSCode
18. WebStorm
19. XCode

Graphic Instruments for Mockups

1. App moqups
2. Balsamiq
3. Draw.io used to draw UML and ER/MR diagrams

Cloud Technologies

1. Google Firebase

Additional Informations

Certifications

1. Certificate of Attendance with proof of leasing "Training course for workers medium risk - Specific part"
2. ICIAP 2021: Certificate of Attendance 21st International Conference on IMAGE ANALYSIS AND PROCESSING
3. IELTS certification obtained on 27 July 2019, average grade: 6.0/9.0, CEFR level B2
4. Samsung Innovation Camp Diploma

Projects

BSc - Software Design Principles:

Standalone Java design and implementation of a system for online grocery and non-food shopping.

BSc - Thesis:

Thesis project "**Design and development of back-end subsystem for an event management service**" where I developed the back-end server exposing REST APIs. The back-end subsystem was developed using the Spring framework (Spring Boot) following the MVC architecture.

MSc - Big Data Management:

Design and implementation of Drupal plugin to configure a content management system to support remote learning. A relational database was designed, using the Materialized Table approach. The Springboot backend, through various stored procedures, exchanged both configuration information and data with the main Drupal backend. A front end, namely a web app, written in Angular was also provided.

MSc - High Performance Computing:

Polynomial and multivariate regression analysis and application of the Kalman filter to the spread and development of Covid-19, using the SIR compartmental model. In this case, Jupyter Notebook as well as Google Colab was used for the multivariate linear regression analysis and implementation of the Kalman filter.

MSc - Internet Of Things:

MAD (My Accessible Data) - Born from my own idea as a response to the growing demand for security in terms of personal data management. The project consists of a multi-user system, in which a mobile or web app is provided that uses IOTA's Masked Authenticated Messaging (MAM) protocol to exchange information (personal, medical, financial, etc.) between users. The innovation is the possibility to securely exchange personal information, allowing users to be the masters of their own data. The front end is realised in Angular and Ionic, while for the backend a Spring Boot REST server was created that exposes the REST API; it also uses IOTA's Tangle blockchain to exchange information between users of the system.

MSc - Parallel Algorithms:

Parallel design and implementation of the Fast Hartley Transform (FHT) in the one-dimensional case, using the message passing C library MPICH.

MSc - Software Engineering:

Design of the architecture and implementation of a multi-user system similar to LinkedIn. The front end was developed in Angular and Ionic, and a Spring Boot REST server for the back end, the Google Firebase cloud service was used for the implementation of push and bulk notifications.

MSc - Thesis:

Research Thesis "**Global downscaling of remotely sensed soil moisture retrievals using Machine Learning**" in which I developed an ML-based method to downscale Soil Moisture satellite data on a regular EASE 2.0 grid, from coarse to finer spatial resolutions, on a global scale.

Interests

1. Climate Change

2. Computer Vision
3. Cyber Security
4. Data Analytics and Big Data
5. Data Science
6. Internet of Things
7. Machine Learning and AI
8. Maths
9. Operating Systems
10. Physics
11. Videogame Design