

Federico Gianni

COMPUTER ENGINEER · SOFTWARE & DATA SCIENCE EXPERT

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“Inside every large program, there is a small program trying to get out.”

Summary

I was born on September 12th 1995 in Treviso, a small town in northeastern Italy, but I was raised in the town of Noto (SR) in Sicily.

Undergraduate Computer Engineer, M.Sc. in Computer Software Engineering at Politecnico di Torino. Passionate about Optimization Methods and Algorithms, Machine Learning, Deep Learning, Big Data and Data Science. Oriented toward challenges that require strong problem solving skills.

Always improving soft skills and teamwork attitude.

Skills

High level languages C, C++, C#, Python, Java

Low level languages Assembly x86, ARM, MIPS

Scripting languages Bash, AWK

Specific Domain Matlab, SQL

Web HTML5, CSS, jQuery, JavaScript, PHP

Tools Git, Docker, PyCharm, CLion, PHPStorm, IntelliJ IDEA, Eclipse, XAMP, Trello, Visual Studio, Android Studio

Education

Liceo Superiore "Ettore Majorana"

HIGH SCHOOL DIPLOMA

- Scientific high school diploma, 93/100

Noto (SR), Sicily

2009 - 2014

Politecnico di Torino

BACHELOR OF ENGINEERING - BE

- Computer Engineering

Turin, Piedmont

2014 - 2017

Politecnico di Torino

MASTER'S DEGREE

- Computer Software Engineering

Turin, Piedmont

2017 - Exp. 2019

Experience

WORK EXPERIENCE

Tutor

COMPUTER TECHNOLOGY AND MATHS

- Private tutor of maths and computer technology for high school students.

Turin, Piedmont

Jan 2016 - PRESENT

Competitive swimmer

GEMINI & CNT - CENTRO NUOTO TORINO

- Regional champion undefeated for 5 years with two still unbeaten regional records (100m and 200m breaststroke Cat. Juniores, Cadets).
- Five national finals.
- Participated twice in international finals.

Syracuse, Sicily & Turin, Piedmont

Sept 2009 - Apr 2015

OTHER EXPERIENCE

"Hello Bot!" - Hackathon

HKM POLITO - MU NU CHAPTER

- Winner of the Hackathon.
- A Python telegram BOT developed in 24h with which presentations were given to several companies.
- Code available on [GitHub](#).

Turin, Piedmont

11 Nov 2017 - 12 Nov 2017

Reply Code Challenge - Hackathon

Turin, Piedmont

REPLY - 'CODE MASTERS TEAM OF REPLY'

15 Mar 2018

- Participation in the Hackathon.
- Find the solution of a logical-mathematical problem in any programming language.

Projects

Examination Timetabling

GitHub

PROJECT FOR THE "OPTIMIZATION METHODS AND ALGORITHMS" COURSE

Oct 2017 - Jan 2018

- The aim is to assign time-slots and resources to the meetings in order to satisfy the constraints as much as possible using meta-heuristics algorithm.

ETS - ESP32 Tracking system

GitHub

PROJECT FOR THE "PROGRAMMAZIONE DI SISTEMA" COURSE

Jul 2018 - Oct 2018

- The purpose of the project is to sniff probe request packets sent by smart-phones that are looking for a Wi-Fi connection. From each sniffed packet some information will be extracted and elaborated in order to do several analysis.
- After each minute these information are sent to a server and processed. Then is possible to see the processed information (position, time frequency and etc.) through a GUI.

Study and design data models for NFV and SDN architectures

Soon on GitHub

SPECIAL PROJECT FOR THE "DISTRIBUTED PROGRAMMING 2" COURSE

Oct 2018 - Mar 2019

- Collaboration with NetGroup PoliTO (Computer Networks Group at Politecnico di Torino).
- Data format (described by means of an XML schema) for the representation of all the most relevant information in the NFV (Network Function Virtualization) and SDN (Software Defined Networking) contexts.
- RESTful web service that permits to store and retrieve the NFV/SDN information.

Writing

Wordlist generator

GitHub

PERSONAL PROJECT

Sept 2015 - Jan 2016

- Make customized wordlist through a variety of methods based on recursive and combinatorial algorithms.
- Useful for brute force attack (dictionary attack).

Python Telegram BOT

GitHub

PERSONAL PROJECT

Oct 2017

- A guide on how to create, configure, code and use a Python Telegram BOT.

C++ Thread Pool

GitHub

PERSONAL PROJECT

Oct 2018

- More threads access at the same data structure and the concurrency is managed by condition variable, lock (lock guard and unique lock) and mutex.

Genetic Algorithm

Soon on GitHub

PERSONAL PROJECT

PRESENT

- Genetic Algorithm to find a solution to the Traveling Salesman Problem.

Machine Learning

GitHub

ACADEMIC PROJECT

Oct 2018 - Jan 2019

- PCA: application of PCA applied on images. It shows what happens if different Principal Components are chosen as basis for images representation and classification. Then a classifier will be chosen and applied in order to classify the images under different PC re-projection.
- SVM: the purpose is to plot data item as a point in n-dimensional space with the value of each feature being the value of a particular coordinate. Then, perform classification by finding the hyper-plane that differentiate the two classes.
- Deep Learning: implementation of a Convolutional Neural Network on a big image data-set. The code implements a basic NN and CNN, the data loading, the training phase and the evaluation (testing) phase. The training and testing are on CIFAR 100 data-set.

Extracurricular Activity

Deep Learning

UDEMY COURSE

- Data Science: Natural Language Processing (NLP) in Python
- Modern Deep Learning in Python
- Deep Learning: Convolutional Neural Networks in Python

Ethical Hacking

UDEMY COURSE

- Learn Ethical Hacking From Scratch
- The Complete Nmap Ethical Hacking Course : Network Security

Honors & Awards

SWIM

2014	Semifinalist , Sette colli - International swimming championship	<i>Rome, Italy</i>
2014	3th Place , Italian swimming championship	<i>Rome, Italy</i>
2014	1st Place , Regional swimming championship	<i>Sicily, Italy</i>
2013	4th Place , Italian swimming championship	<i>Rome, Italy</i>
2013	1st Place , Regional swimming championship	<i>Sicily, Italy</i>
2012	5th Place , Italian swimming championship	<i>Rome, Italy</i>
2012	1st Place , Regional swimming championship	<i>Sicily, Italy</i>
2011	1st Place , Jeux des îles - International swimming championship (Cat. Juniores)	<i>Palermo, Italy</i>
2011	1st Place , Regional swimming championship	<i>Sicily, Italy</i>
2010	1st Place , Regional swimming championship	<i>Sicily, Italy</i>

HACKATHON

2018	Participant , Reply Code Challenge	<i>Turin, Piedmont</i>
2017	1st Place , HKN Hackathon	<i>Turin, Piedmont</i>

Languages

Italian, Mother-tongue
English, B2, Level attested by IELTS Certificate - British Council
French, A2