



Matteo Maso

Software Engineer

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Summary

I am Matteo Maso and I love to solve complex problems using technology and engineer. An international working environment and finding concrete solutions for global issues are the two careerer features that inspire me the most.

As a recently graduated student in one of the best university of Italy I look forward to join an R&D team of truly passionate people who aim to push technology boundaries.

Curiosity and a big passion for what I do have always driven my studies and projects, and those are the main elements that I pour into new roles and challenges.

During my free time, when I do not work on personal projects, I love reading, travelling and meet new people, in particular when they come from another country.

Work experience

Master thesis Intern

09.2018 - 03.2019

NEC Laboratories Europe in Heidelberg (Germany)

Thesis' title: "*Study and Implementation of Blockchain compression*".

I have mainly performed the following tasks:

- Study the literature and analyse the best-known Blockchains: Bitcoin and Ethereum;
- Design and implement a software able to parse and analyse the data contained in the Bitcoin;
- Design and develop a prototype compression library using Python to demonstrate that Bitcoin data is up to 45% compressible while maintaining the same level of security.

IT Consultant

09.2017 - 03.2018

ESU Service for the academic world, Padua (Italy)

ESU is a company that manages 9 university residences and provides financial assistance to students. I have performed the following tasks for them:

- Provide computer assistance to ESU offices and computer rooms in residences;
- Fix and update all the computers available in the different residences, also developing and providing a new guideline to all responsible students;
- Introduce doormen to the use of the computer, providing them a basic knowledge of the use of e-mail, browser and management system.

Education

Master in Computer Engineering 108/110

11.2016 - 12.2019

University of Padua (IT)

The master provides a deep understanding of the different areas of computer engineering, telecommunications and business organization. Throughout many courses, I have decided to work on projects that aim to have a practical approach and increase my teamwork skills.

University of Padua (IT)

In-depth training in both physical and mathematical field plus in the methodological disciplines of Information Technologies (IT).

Thesis title: [Study and implementation of a Software Defined Network based on OpenFlow.](#)

Projects

VisualSuffixTree

05.2018 - today

Design and development of C++ software capable of searching for sub-sequences in DNA strings (6 billion characters) and display them graphically using the structure of the *Flame graph*.

Activity: software design and implementation.

In particular, I focused on efficiently saving the large amount of metadata.

I used the C, C++ languages to better manage the memory and get a fast software.

For the graphic part instead I used JavaScript. [Code Repository](#)

The new LeetCode - web application project

04.2018 - 07.2018

The backend was developed using JavaServlet and PostgreSQL for the database, while the following technologies are used for the front-end: JSP pages, REST Web services, HTML, CSS, Javascript, AJAX, jQuery and D3.

Other technologies: Git, Maven, Tomcat, JSP pages

Permission-less Blockchain

03.2018 - 06.2018

In a team of 3 people for learning purposes we designed and developed a distributed software that creates a blockchain. I managed the blockchain data structure which aims to be a replicated and eventually consistent data structure. [Code repository](#)

Technologies: Git, IntelliJ, Java, Socket.

Wiki-pages clustering

04.2017 - 06.2017

In this project, we have implemented and tested different clustering strategies over a dataset of a few thousand of Wikipedia pages using Java and Spark.

Client-Server Skype

01.2017 - 05.2017

Development of a video client-server entirely in C language. The server, using the OpenCV library, acquires a streaming video from the webcam of the computer, which is sent in real time to a client software that displays it on the screen.

The software uses the TCP protocol for basic control and synchronization, while the UDP protocol for video streaming.

Embedded Programming

10.2015 - 10.2016

For educational purposes I developed some code to control peripherals using the Microchip 16f877 microcontroller.

Activity: creation of a library to control a two-line alphanumeric display .

I use PicKit2 and MPLAB IDE to create the executable code and to load it in the microcontroller. Develop the code to control Stepper motor and to acquire digital input from pins.

External Courses

SCHOOL OF ENTREPRENEURSHIP [Ayuppie.com](https://ayuppie.com)

I am currently part of a start-up through participation in Skunkworks, which is an innovative entrepreneurial formula that allows recent graduates to participate in business and training activities.

APPLIED WEB APPLICATION SECURITY Course provided from DECAMP - www.myDECAMP.eu

The course provides basic knowledge to understand the vulnerabilities of a modern web application, both from an offensive and a defensive perspective.

The course was taught by prof. Kimmo Saurén from the Metropolia University of Applied Sciences, Finland.

DEVELOPMENT PATH OF TRANSVERSAL COMPETENCES

The educational path was made up of experiences laboratory based on the following soft skills: leadership, team working, communication, public speaking, resiliency, problem-solving, innovation and creativity.