



Antonio Cruciani

Curriculum Vitae

Contact Information

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GitHub, github.com/Antonio-Cruciani.

Education

2017–2020 **Student**, *University of Rome , Tor Vergata, Master's degree.*

Computer Science.

Final mark : 110/110 Cum Laude

Supervisor: [Prof. Francesco Pasquale](#)

Thesis title: Dynamic Random Graphs and unstructured P2P networks, analysis of two models inspired by the Bitcoin network.

Available at the following [link](#)

2011–2017 **Student**, *University of Rome , Tor Vergata, Bachelor's degree.*

Computer Science.

Final mark : 92/110

Supervisor: [Prof. Giorgio Gambosi](#).

Thesis title: Efficient learning methods for playlist prediction.

2006–2011 **High School** , *ITIS Montani, Fermo, .*

Qualified Industrial Technician specialization : Information and Technology

Experience

Research

February **Big Data and Information Retrieval**, BIG DATA ANALYTICS LAB AT FON-
Now DAZIONE UGO BORDONI , Working on MinHash Signature Estimation Algorithms
2020 for Graph Clustering, Centrality, Ranking and delta encodings .
Supervisor: [Giambattista Amati](#)

University

September **Talk**, *10th Italian Information Retrieval Workshop (IIR-2019)*, Padua.
2019 I presented the joint project with Fondazione Ugo Bordoni about index compression techniques.
June 2019 **Seminar**, UNIVERSITY OF ROME TOR VERGATA, Talk on FPT Algorithms.
I held a seminar about Iterative Compression technique for NP-Hard problems on Graphs.
October 2018 **Teaching Assistant**, UNIVERSITY OF ROME TOR VERGATA, Prof. Miriam Di
June 2019 Ianni.
Computability and Computational Complexity Theory
List of Exercises (IT) proposed by me during my lessons available at the following [link](#)
December **Teaching Assistant**, UNIVERSITY OF ROME TOR VERGATA, Prof. Gianluca
2017 June Rossi .
2018 Computer programming with laboratory

Work

October 2015 **Developer**, WEDOT, Roma.
January 2016 Software developer for Microsoft platforms, .Net , C# ,Windows Server.
June 2010 **Intern**, NEW SYSTEM, Falerone,Fermo,Marche.
September Web developer and sysadmin
2010

Publications

Conferences and Workshops

2019 A. Cruciani, D. Pasquini, G. Amati, and P. Vocca, About Graph Index Compression Techniques, Proceedings of the 10th Italian Information Retrieval Workshop (IIR-2019), Padua, Italy, September 16-18, 2019, CEUR-WS.org/Vol-2441/paper23.pdf.

Advanced Courses

2019 Semidefinite Programming and Discrete Optimization. University of Rome: "Tor Vergata". Ph.D. (Computer Science, Control and Geoinformation) course held by [Prof. Angelika Wiegele](#).
2019 Natural Distributed Algorithms. University of Rome: "Tor Vergata". Course held by [Dr. Emanuele Natale](#).
2019 Algorithms and computational models for large-scale data analysis. University of Rome: "La Sapienza". Ph.D. (Data Science) course held by [Silvio Lattanzi](#).

Certifications

- 2017 [MOOC] Approximation Algorithms by École Normale Supérieure
Massive open online course by ENS on approximation algorithm. Particularly emphasizes algorithms that can be designed using linear programming and semidefinite programming.
- 2017 Machine Learning Specialization by Washington University
Online specialization on machine learning covering: foundations of ML, regression, classification, clustering and retrieval. To see the certification click on the name of specialization
- 2017 Machine Learning By Stanford University
Online course on machine learning, topics: supervised learning, unsupervised learning. To see the certification click on the name of specialization
- 2017 Common European Framework (CEFR) B1

Programming skills

- Basic OWL, SPARQL,FORTRAN,COBOL,LISP
- Intermediate GO,MATLAB,JAVASCRIPT,R,ASP.NET,JAVA
- Advanced PYTHON,C,C++,C#,SQL,PHP
- Frameworks Apache Spark

Languages

- Italian **Mother tongue**
- English **Upper Intermediate**
- I have been attending an English school, since February 2020 (My English School).
I will take an IELTS Academic certification as soon as the covid lockdown ends.

Interests

- Computational Complexity
- Network Analysis
- Stochastic Processes
- Algorithms
- Machine Learning
- Property Testing
- Distributed Computing
- Spectral Graph Theory
- Dynamic Graphs
- Algorithmic game theory
- Information retrieval

Antonio Cruciani July 6, 2020

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