

Gianmaria Del Monte

SOFTWARE ENGINEER

Geneva - Switzerland

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Personal Profile

Diligent Software Engineer with passion of designing and developing **highly scalable software systems**. Excellent attention to details and problem solving, with an innate ability to learn and master new technologies. Experience in software development's life cycle, including **designing, coding, testing, delivery** and **maintenance**. Keen to use my skills to push the frontiers of science and technology.

Education

MEDILS

Thematic CERN School of Computing

- Held on *Security of research computing infrastructures*

Split, Croatia

2022

Rome Tre University

M.Sc. in Computer Engineering

- Thesis title: *Scaling blockchains without giving up decentralization and security*
- Thesis supervisor: Prof. Maurizio Pizzonia
- Final mark: 110/110 with honors

Rome, Italy

2019 - 2020

Rome Tre University

B.Sc. in Computer Engineering

- Thesis title: *Implementation of an efficient protocol for data integrity on Cloud*
- Thesis supervisor: Prof. Maurizio Pizzonia
- Final mark: 110/110 with honors

Rome, Italy

2016 - 2018

Work Experience

CERN

Software Engineer

- Proactively support and maintain the CERNBox software ecosystem to provide a highly reliable service for more than 37K users, holding 18PB of data
- Design, implementation and deployment of a new backup system for CERNBox/cephfs (24/7, 600M daily file ingest)
- Engagement with the open source community (Reva) to provide various bug-fixes and major enhancements (Lock APIs, federated shares)
- Ensuring day-to-day operational activities are carried out in a timely and reliable way
- Supervision of a summer student to implement self-restore functionalities to address user community demand
- Coordination among other team members of successful delivery of service improvements, specially on the server side
- Support CERN IT Security Team as second line member to ensure Organization security
- **Technical Skills:** *Go, Python, CentOS, Puppet, Bash, Git, MySQL, gRPC, REST APIs, EOS, distributed systems*

Geneva, Switzerland

Jan 2021 - Present

Roma Tre University

Teaching assistant

- Teaching assistant for Fundamentals of Computer Science course for the bachelor degree in Computer Engineering
- **Technical Skills:** *Java, C, data structures and algorithms, memory allocation*

Rome, Italy

Nov 2018 - Jul 2020

Roma Tre University

Software Engineer

- Designed and implemented a mobile app that streamlines every aspect of student life at Rome Tre University, from booking a spot in the library, scheduling exams and real-time notifications about lecture delays and cancellations
- **Technical Skills:** *Java, Android*

Rome, Italy

Oct 2019 - Nov 2019

Projects

R3busFormazione

Roma Tre University

- A web application to manage a training centre supporting local authentication and OAuth, automatically deployed on Heroku through CircleCI, realized in **Spring Boot** and **Java**

Rome, Italy

2018

Pipeline Integrity

Roma Tre University

Rome, Italy

2018

- Implementation of an efficient protocol for data integrity, realized with actor model, using **Akka Framework** and **Kotlin**

Skills

Programming Java, Go, Python, C, Dart, Kotlin

Miscellaneous Linux, Shell (Bash/Zsh), \LaTeX , Git, Spring, Flutter, MySQL, PostgreSQL, Redis, MongoDB, Puppet, Docker, Distributed storage systems (EOS), distribute programming, desing patterns, design architectures

Soft Skills Time Management, Teamwork, Problem-solving, communication, positive attitude, self-supervising, team leadership

Achievements

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|------|---|-------|
| 2019 | 3rd place , Local competitions of CyberChallenge 2019 | Italy |
| 2019 | 4th place , National competitions of CyberChallenge 2019 | Italy |
| 2018 | Elite , <i>Luca Raso</i> scholarship for best students enrolled in Master's degree in Computer Engineering at Roma Tre University. | Italy |
| 2016 | Winner , Scholarship for best average grade in the Engineering Department of Roma Tre University. | Italy |

Publications

Scaling blockchains without giving up decentralization and security: A solution to the blockchain scalability trilemma

Gianmaria Del Monte, Diego Pennino, Maurizio Pizzonia

Proceedings of the 3rd Workshop on Cryptocurrencies and Blockchains for Distributed Systems, 2020

Conferences

C(ERN) BACK(UP): consolidated multi-petabyte backup solution for heterogenous storage and filesystems

Gianmaria Del Monte, Elizaveta Ragozina, Roberto Valverde Cameselle

CS3 2023 - Cloud Storage Synchronization and Sharing, 2023, <https://indico.cern.ch/event/1210538/contributions/5207944>

Applications integration beyond local clouds with OCM

Giuseppe Lo Presti, Gianmaria Del Monte, Michiel De Jong

CS3 2023 - Cloud Storage Synchronization and Sharing, 2023, <https://indico.cern.ch/event/1210538/contributions/5206694>

User-friendly OCM Invitation and Sharing: OCIS, CERNBox

Elizaveta Ragozina, Gianmaria Del Monte, Samuel Alfageme Sainz

CS3 2023 - Cloud Storage Synchronization and Sharing, 2023, <https://indico.cern.ch/event/1210538/contributions/5208014>

CERNBox backup evolution

Gianmaria Del Monte, Roberto Valverde Cameselle

6th EOS workshop, 2022, <https://indico.cern.ch/event/1103358/contributions/4758282>

Visualizing physics data in ownCloud Infinite Scale

Gianmaria Del Monte

ownCloud Conference, 2021, <https://cfp.owncloud.com/occon2021/talk/W8KHKM>

Languages

English Professional proficiency

Italian Native proficiency

French Basic knowledge