

# 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*

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 Roma Tre University, like 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

- Implemented an efficient protocol for data integrity on storage cloud services, 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

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

Data safety in CERNBox

Gianmaria Del Monte

CERNBox User Forum, 2021, <https://indico.cern.ch/event/1067354/contributions/4646494/>

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