

# Francesco Ranellucci

🌐 frr0.github.io | ✉ fra.ranellucci@gmail.com | 🔗 linkedin.com/in/fr07 | 🐙 github.com/frr0 | 🏠 gitlab.com/fra07

## EXPERIENCE

### Software Engineer intern

Jul. 2022 – Nov. 2022

National Institute of Metrological Research – INRiM 🏠

Turin, Italy

- Developed a user-friendly GUI software for Microsoft Windows using C#, tailored for interfacing with a Gage PCI Digitizer utilized in an advanced non-linear optical microscope setup.
- Implemented multi-threaded programming to optimize software performance, enabling concurrent processing of data from all 8 channels of the acquisition card. This ensured seamless real-time data acquisition and analysis, even during extended time-lapse experiments.
- Developed software features for generating high-quality images of analyzed cells and graphical representations, crucial for aiding researchers in analyzing experimental data.
- Integrated socket communication for seamless interaction between the software and the digitizer device.
- Leveraged C# libraries such as Bitmap, Libtiff, Net, and System to enhance functionality and streamline development.
- Utilized Git for version control to ensure collaboration and manage software revisions effectively.

## EDUCATION

### Polytechnic University of Turin

Turin, Italy

Bachelor of Science in Computer Engineering

Oct. 2019 – Ongoing

### Liceo Scientifico Statale Galileo Ferraris

Turin, Italy

Diploma of Scientific High School

Sep. 2014 – Jul. 2019

### Big Sky High School

Missoula, MT, US

High School Exchange Program

Aug. 2017 – Jun. 2018

## PROJECTS

### Fantacitorio bot 🐙 | Python, Telegram API, Snscape, Git

- Development of a Telegram bot using the Telegram API to create a game manager inspired by fantasy football. The bot is capable of live scraping a website updated during a TV show and computing points and rankings for teams. Users can interact with the bot via a Telegram group chat involving all players.

### Number Genarator Android App 🐙 | Java, Android studio

- Development of an Android app written in Java. The app was created to learn how to work within the environment and the language. The goal was to generate a random number within a user-specified range.

### Average deposit & bank statement 🐙 | Python

- Development of an average deposit and bank statement calculator that generates a paper document containing all data and information. The calculator operates based on a \*.csv file (generic MS Excel), provided by the user as input.

## TEAM WORK EXPERIENCE

### European BEST Engineering Competition - EBEC 🏆

2019, 2020

EBEC Competition, (2019 Team Design, 2020 Case Study)

Turin, Italy

- Participated in the European BEST Engineering Competition (EBEC), a three-level, team-based engineering competition held across 19 countries. Contributed to both case study and team design categories during participations

### Investment Challenge 🏆

2020

Reply Investment Challenge

Turin, Italy

- Engaged in BG Saxo investment competitions, involving real market dynamics and educational content on diverse asset classes and investment strategies by Reply and MIP, aimed at gaining valuable insights

### Giornata della Scienza 🏆

2017, 2018, 2019

Turin science fair, (2017 Physics Team work, 2018 Math Team work, 2019 Electronics Team work)

Turin, Italy

### Clean air and healthy homes symposium 🏆

2018

Big Sky High School, University of Montana, Montana Department of Environmental Quality

Missoula, MT, US

## TECHNICAL SKILLS

**Languages:** C, C#, Java, Matlab, Python, Assembly, Shell, SQL, Lua, Latex, Markdown, HTML, CSS.

**Developer Tools:** Linux, Command Line, Git, GitHub, GitLab, Svn, Raspberry Pi, Arduino, OOP, Algorithms and Data Structures, Vim, VSCode, Visual Studio, Eclipse, IntelliJ.