Matteo Giorgi

Education

- **[2024]** MSc in Computational Finance, *Department of Mathematics - University of Padua* (in progress)
- **[2023]** BSc in Computer Science, *Department of Computer Science - University of Pisa* (summa cum laude 110L/110)
- **[2011]** BEng in Mechanical Engineering, *Department of Industrial Engineering - University of Pisa* (not completed)

Programming & Software

- **LANGUAGES** *C/C++*, *Java*, *Python*, *JavaScript*, *Go*, *Scheme*, *OCaml*, *Haskell*, *Bash*, *AWK*
- **UNIX** *GNU/Linux* and *BSD* system management, *C* system programming and good knowledge of the *POSIX* standard
- **TOOLS** Experience with various software such as *Vim*, *Emacs*, *Git*, *Docker*, *LaTeX*, *MATLAB*, and *Wolfram Mathematica*
- **EXTRA** Knowledge of *SQL*, *HTML* and *CSS*

Relevant Experience

- **TOODY** *Python* web application for the detection of variability indicators in requirements documents of software systems, written for my BSc thesis. The application uses *Spacy* for *NLP* analysis and *Flask* for the web interface.
- **LAB-ASSISTANT** Worked, in support of Professor Pelagatti, as lab assistant for the *C* laboratory exam at BSc in Physics at the *University of Pisa*. The main task was to help students during the exercise sessions and to correct their assignments.
- **CNR-PROJECT** Worked, together with a colleague of mine, as a *Python* programmer inside the *CNR* offices in Pisa, helping in the realization of a scale model for blind people. The project was under the supervision of Doctor Furfari from *CNR* and Professor Pelagatti from the *University of Pisa*.
- **PODEEN** Public repository containing a collection of configuration files and installation scripts for a complete and efficient minimal *UNIX* work environment based on any *Debian* distribution.
- **ASTEROIDS** *JavaScript* implementation of the popular game *Asteroids*. The game is written using the *p5.js* library and is particularly useful to understand the basics of *Event Programming*.
- **RSA-REPORT** Independent studies, under the supervision of Professor Romani from the *University of Pisa*, regarding the attacks that exploit the *RSA* cryptosystem vulnerabilities with a specific focus on the *Wiener Attack* and its use of *Continued Fractions* for the factorization of the *RSA* module.
- **HACKATHON** First place in the 2021 edition of *ContHackt*, organized by the *University of Pisa* and *Contamination Lab Pisa*. As winner, our team had access to the 2021/2022 *EUAcceL* project organized by the *European Institute of Innovation and Technology* and won the final stage with a blockchain prototype for the tracking of food products.

Languages

- **ENGLISH** Advanced proficiency in speaking and writing, *Cambridge C1 Advanced (IELTS 7.0)* certification
- **FRENCH** Basic understanding in speaking and writing, *DELF A2* certification
- **ITALIAN** Mother tongue

Areas of Interest

- Being a student of *Computational Finance*, I am particularly interested in *Numerical Approximation* and *Mathematical Programming*. Specifically *Stochastic Optimization* and its applications in the field of *Portfolio Management*.
- I am very keen on programming languages and I often find myself playing with a new language trying to improve my skills; this has made me focused on *Functional Programming*, experimenting with languages such as *Ocaml* and *Haskell*.
- *Cryptanalysis* is another field that I find fascinating. I spent some time studying *Lattice Theory* and its implications regarding *Elliptic Curve* and *Post Quantum Cryptography*.

Competitive Sports

- I have more than ten years of sailing activity at both national and international level in *Optimist*, *420*, and *470* classes, most of which among the ranks of the Junior National Team. I competed in several prestigious regattas, above all *Kiel Week* and *Barcolana* as the two largest sailing events in the world.
    - NATIONAL Ranked first once and qualified among the first ten Italian Juniors other four times. Notably, winner of the *Young Barcolana*, *Mediterranean Cup* and *Trofeo Accademia Navale Juniores*.
    - INTERNATIONAL Competed, as a member of the Italian National Team, in one *World Championship* in Qingdao (China), three *European Championships* in Tavira (Portugal), Dublin (Ireland), and Riva del Garda (Italy), and finished as runner-up in one *European Team Championship* in Berlin (Germany).
- As a side activity, I have practiced running at a discrete level, participating in several 10km and half-marathons. I have also took part in a few long-distance races, such as the *Etna Marathon* at over 3000m above sea level.