**Personal Information**

* **Name:** Gaston Mazzei
* **Description:** MSc Physics, Scientific Computing Engineer. I like designing, building, improving, and using scientific tools to solve complex problems.
* **Age:** 26
* **Gender:** M
* **Marital Status:** single
* **Citizenship:** Argentina
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* **Github:** github.com/GastonMazzei
* **LinkedIn:** linkedin.com/in/gaston-mazzei-935795184

**Work Experience**

* **Role:** CFD Engineer

**Period:** May 2022 – September 2022

**Type:** internship

**Employer:** DAEP – ISAE-SUPAERO (Département Aérodynamique et Propulsion, at ISAE-SUPAERO)

**Description:** Optimization of Fluid Dynamics Simulator on state-of-the-art supercomputers using Intel MKL’s BLAS and LAPACK, and further adaptation to CUDA for NVIDIA GPU compliancy. Technologies include Slurm, MPI, C++ and Python. This a four-month internship as part of the Quantum Technologies Fellowship program.

**Contact References**: available for request.

* **Role:** C++ Developer

**Period:** Jan 2022 – May 2022

**Type:** internship

**Employer:** VENISE – LISN (Virtual & Augmented Environments for Simulation & Experiments, at the Laboratoire Interdisciplinaire des Sciences du Numérique)

**Description:** Design and implementation of Senior Researcher’s augmented reality ideas on state-of-the-art experimental embedded systems using C++ and in particular the libraries OpenGL and Boost. Role included building a server to offload data processing, which was done using Python and Flask. This a four-month internship as part of the Quantum Technologies Fellowship program.

**Contact References**: reviews publicly available at LinkedIn.

* **Role:** Network Automation & Optimization Engineer

**Period:** Jan 2021 – Aug 2021

**Type:** full-time

**Employer:** Iquall Networks Inc.

**Description:** Software customization to implement clients’ use-cases using Python, NoSQL and C++. Under constant feedback from the clients, automated solutions were implemented inside the company’s software to optimize the client’s metrics. Skills involved include Data Analysis, Agile Methodologies, REST API, System Administration, Linux and CentOS, QA and Client Services.

**Contact References**: reviews publicly available at LinkedIn.

* **Role:** Physics Machine Learning Developer

**Period:** Mar 2020 – Dec 2020

**Type:** internship

**Employer:** ICAS - UNSAM (International Center for Advanced Studies, San Martin University)

**Description:** Design and implementation of numerical simulations of physical systems in Python and C++. Characterization of the interaction with a neural network using Tensorflow. Fullstack Development of an open-source website to enable a simplified and free access to this family of Machine Learning models with academic purposes. This internship was part of the MSc. Physics thesis. It was 100% remote, which shows self-motivation and an hability to work independently.

**Contact References**: available for request.

* **Role:** Jr Business Intelligence Analyst

**Period:** Nov 2018 – Nov 2019

**Type:** part-time

**Employer:** Kosten Aike Hotel

**Description:** Design and implementation of a pipeline. Automation of data collection and processing in order to assist the executive team produce data-driven decisions and ecology compliance reports. Development of containerized software using the followin technologies: Python, Docker, SciPy, NumPy, Tensorflow. Hability to work independently allowed a big part of the job to be carried out remotely.

**Contact References**: reviews publicly available at LinkedIn.

* **Role:** Microfluidic Technician

**Period:** Jul 2017 – Jul 2018

**Type:** internship

**Employer:** CNEA (Argentina’s National Atomic Energy Commission)

**Description:** Design and fabrication of microfluidic chips and the characterization and optimization of the manufacturing process in the context of an experimental compulsory-subject for the BSc + MSc Physics degree. Technologies included CAD, Clean Room processes, and data analysis with Python.

**Contact References**: reviews publicly available at LinkedIn.

**Education**

* **Degree:** Master in Quantum & Distributed Computer Science

**Period:** Sep 2021 – Apr 2022

**Institution:** Universite Paris-Saclay

**Comments:** formally enrrolled and passed the master M1 QDCS at Paris-Saclay as part of the Quantum Technologies Fellowship, which main focus was to enable the cycle of two 4-month internships. Theoretical and hands-on knowledge was acquired in the fields of parallel computing, distributed computing, GPU programming, MPI programming, and formal verification among others.

* **Degree:** TALENT Summer School (Machine Learning applied to Physics)

**Period:** July 2021

**Institution:** ECT\* (European Centre for Theoretical Studies in Nuclear Physics)

**Comments:** it was held virtually, and included hands-on experience in Numerical Simulations, Optimization, and Machine Learning in Python.

* **Degree:** Master in Physics

**Period:** 2015 – 2020

**Institution:** Universidad de Buenos Aires

**Comments:** 5-year degree, internationally equivalent to a Bsc + Msc in Physics and in Spanish formally called “Licenciatura en Ciencias Fisicas”. Final Academic Transcripts and thesis defense are publicly available at personal website.

* **Degree:** Bachelor in Experimental Physics

**Period:** 2015 - 2020

**Institution:** Universidad de Buenos Aires

**Comments:** 4-year degree, internationally equivalent to a Bsc Experimental Physics and in Spanish formally called “Asistente de Investigacion en Fisica”. It’s an optional branch from the above mentioned Master degree.

**Skills**

* Python
* C++
* MPI
* CUDA
* OpenMP
* Slurm
* BLAS
* LAPACK
* NumPy
* SciPy
* Tensorflow
* Mathematical Models
* Bayesian Models
* Statistics
* Physics
* Optimization & Metaheuristics
* Machine Learning
* Deep Learning
* Neural Networks
* Presentations
* Differential Equations
* Games Theory
* Computer Vision
* CI
* Apache
* Kafka
* Spark
* Fullstack Development
* Economics
* Dealing with Deadlines
* Motivating Colleagues
* Clarity during Brainstorming
* Insisting with Diplomacy
* Building Rapport
* Sales & Clients

**Languages**

* **Spanish:** C2
* **English:** C1
* **French:** B2
* **Italian:** B1

**Certifications**

* IELTS UKVI

**Awards**

* Latin Minority Sponsorship for NVIDIA CUDA C++ Personalized Course
* Quantum Technologies Fellowship
* Best Undergraduate Paper Award

**Publications**

* **Title:** Comparison of CoModGANs, LaMa and GLIDE for Art Inpainting-Completing MC Escher's Print Gallery

**Journal:** NTIRE – CVPR, 2022

* **Title:** AI-Friendly.com: Artificial Intelligence Made Friendly

**Journal:** ASAI - ISSN 1666-1079 p53-54, 2021

* **Title:** Image Inpainting Applied to Art: Completing Escher’s Print Gallery

**Journal:** LXAI Research Workshop at ICML 2021, id 19

* **Title:** Delta Hedging with Transaction Costs: Dynamic Multi-Scale Strategy using Neural Nets

**Journal:** MACI, ISSN: 2314-3282 pp. 459-462, 2021

* **Title:** Option Pricing Model with Transaction Costs

**Journal:** MACI, ISSN: 2314-3282 pp. 569-573, 2017