MARIANO CROSETTI

Msc. Computer Science ◇ Argentinian - Italian

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EXPERIENCE

QuarkAI - Software Engineer - NLP Specialist *Santa Clara, CA*   *April 2022 - Present*
- Developed a translation system from Natural Language to a Structured Query with 95% recall at 90% precision.
- Integrated the SDQ system into production running service (with 0.999 availability) scaling to +10.000 users across +10 countries.
- Researched NLP few-shots learning solutions to improve classical search by using LLMs

Ventilemos - Founder - CTO - ventilemos.com.ar *Argentina*   *November 2020 - Present*
- Designed, manufactured and marketed CO_2 detectors for ventilation measuring (in COVID-19 pandemic context).
- PCB design and circuit analysis with Eagle toolkit. Firmware programming in Arduino C++ for Atmega328P.
- Designed and implemented an IoT centralized system (using MQTT and MERN stack for the platform) for ESP32 processor.
- Contacts with the city, state, and national public decision-makers, joining our company to VentilAR nationwide campaign.

Endcoronavirus Volunteer - Data Scientist - Frontend - Sysadmin - covidargentina.com.ar *Argentina* *March 2020 - Present*
- Launched Shiny dashboard covidargentina.com.ar (+500 users monthly) by collaborating with NECSI and EndCovid.
- WebServer maintenance, databases update crontabs, software patches deployment (CI/CD), SSL certificates, DNS healthy checks.

Santa Fe Electoral System - AI Consultant - Android programmer *Argentina*   *January 2021 - October 2021*
- Implemented signature recognition at Android app used in National elections making the task safer and 2x faster. Pytorch used.

Brightsector Algorithms - Data Scientist - Machine Learning Engineer *Argentina*   *August 2018 - June 2019*
- Consultant for MercadoLibre, an e-commerce platform in over 18 countries (top 1 market cap Argentinian company).
- Worked on automatic attribute extraction for e-commerce to improve search filters and search engines.
- Made improvements in the recall at top GMV product domains (an increase of 350% in attribute extraction).

Google Inc - Software Engineering Intern - *Mountain View, California*   *January 2018 - April 2018*
- Extended a Chromecast's service to support different (audio/video) settings and device switching.
- Coordinated the cross-functional collaboration with graphics, API, and infrastructure teams.
- Developed in C++ working with PulseAudio and Vulkan. Frontend extended using JS.

Google Inc - Software Engineering Intern - *San Francisco, California*   *June 2017 - September 2017*
- Researched, designed, and implemented solutions to improve the user experience and support a larger scale of users.
- Worked on a platform to run Code Jam and other competitions. Worked in C++, using a NoSQL database for storage.
- Attended the Code Jam World Finals 2017 in Dublin as a staff member.

Politecnico High School - Programing Contest Trainer   *March 2011 - December 2012*
- Before the course, zero student participated. In 2012, 75% of the Argentinian IOI national team came from this school.

PROJECTS

- Created a problem with a novel application of Segment Tree for 2019 ICPC Latin America Regional. Member of the judge board.
- Assisted as an international professor at Cundinamarca Training Camp 2019: teach about advanced data structures for strings.
- Created a Haskell DSL interpreter for a functional programming language with copatterns (generalization of pattern matching). Improved the work of Abel, Pientka, Thibodeau, Setzer by proposing a linear covering algorithm (they introduced NP algorithm).
- Implemented a handwritten signature verification system by using Siamese Network and Triplet Loss. Pytorch + FastAI used.

SKILLS

Proficiency Programming Languages	C/C++, Python, JavaScript, Haskell, Java
Web Stack	SQL, MongoDB, GraphQL, React, Redux, NodeJS, Express
Data Analysis	Pandas, Numpy, Flask, Dash, R., Shiny
Deep Learning	CUDA, Pytorch, FastAI Library, Keras, TensorFlow
Software & Tools	GNU/Linux, GIT, Gitlab, Github for collaborative development
NLP	Stanford CoreNLP, spacy, LLaMa, GPT, Langchain, Llama Index

EDUCATION

Universidad Nacional de Rosario - Computer Science BsC + MsC - GPA: 9.83/10	*March 2014 - March 2022*
Friend of Fulbright Scholarship - Organized by U.S. Embassy	*January 2016 - March 2016*

ACM ICPC COMPETITIVE PROGRAMMING

Biggest collegiate programming contest: near 50.000 contestants around the world.
Focused on advanced algorithm and data structure knowledge and team work.

ACM ICPC World Finals, Morocco	87° place	*2015*
ACM ICPC World Finals, Thailand	28° place, **Latin American Champion**	*2016*
ACM ICPC World Finals, Portugal	Argentinian official team coach	*2019*