

# MARIANO CROSETTI

Msc. Computer Science student ◊ Argentinian - Italian

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## EXPERIENCE

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**QuarkAI** - Machine Learning Engineer - NLP *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 CO2 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

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• 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

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<b>Advanced Programming Languages</b>	C/C++, Python, JavaScript
<b>Intermediate Programming Languages</b>	Erlang, Haskell, Ruby, Java
<b>Web Stack</b>	SQL, MongoDB, GraphQL, React, Redux, NodeJS, Express
<b>Data Analysis</b>	Pandas, Numpy, Flask, Dash, R., Shiny
<b>Deep Learning</b>	Pytorch, FastAI Library, Keras, TensorFlow
<b>Software &amp; Tools</b>	GNU/Linux, GIT, Gitlab, Github for collaborative development

## EDUCATION

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**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

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

<b>ACM ICPC World Finals, Morocco</b>	87° place	<i>2015</i>
<b>ACM ICPC World Finals, Thailand</b>	28° place, <b>Latin American Champion</b>	<i>2016</i>
<b>ACM ICPC World Finals, Portugal</b>	Argentinian official team coach	<i>2019</i>