

# Dr. Eng. J. AGUSTIN BARRACHINA

Machine Learning — Software Developer — Signal Processing

IEEE Member (93156321) & IEEE GRSS Social Media Ambassador (SMA)

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## Experience

### SAFRAN

February 2023 - present

AI Project Manager / Machine Learning Engineer

Paris, France

- Managing a project of 2k+ human resources hours budget from conception to completion
- Increased time series filtering accuracy from 70% to 90% using ML-based methods
- Developed ML-Pipeline for keeping track of datasets and ML models using best practices and ML Design Patterns
- Migrated Python Signal Processing algorithms to the C++ product code that was sold to the client

Python C++ TensorFlow Pandas Docker CI/CD

### ONERA & École CentraleSupélec & DGA

June 2019 - December 2022

Ph.D. on Machine Learning

Paris, France

/NEGU93/cvnn; negu93.github.io/cvnn\_vs\_rvnn\_polar\_applications

- 9+ Publications at prestigious Springer and IEEE conferences and journals
- Open-source repository with 120k+ PIP downloads, 150+ GitHub stars
- Ranked top 15% reviewer score on IEEE MLSP 2021 publication
- 3MT IEEE GRSS Excellence in Technical Communication Student Prize Award Finalist
- Reddit r/MachineLearning WAYR (What are you reading) Most upvoted paper week 116

Python TensorFlow

### CNRS

September 2018 - March 2019

Electronics Internship

Grenoble, France

/NEGU93/CYUSB3KIT-003\_with\_SP605\_xilinx

- Optimized the data acquisition sample rate for Mimac-FastN by upgrading the electronics from USB 2 to USB 3

C/C++ VHDL ROOT

### Cisco Systems

November 2017 - April 2018

Software System Engineer Intern

Buenos Aires, Argentina

- Service Provider for AMX (Claro). CCNA SPNGN1 certification

### INVAP — École des Ponts

Jan - Feb 2016 — 2015

Summer internship

Bariloche, Argentina — Paris, France

## Education

### Instituto Tecnológico de Buenos Aires

March 2012 - July 2018

Master in Electronical Engineering with specialization in Signal Processing

Buenos Aires, Argentina

- Second highest GPA score among 26 students (95<sup>th</sup> percentile)

### École Polytechnique (l'X)

September 2016 - March 2017

International Exchange Program

Paris, France

- Academic performance: 16.84 / 20

## Competitions

Safran Data Challenge (2023): 1 / 16 (100<sup>th</sup> percentile)

J.P.Morgan Chase & Co Hackathon (2019): 3 / 20 (90<sup>th</sup> percentile)

IEEEExtreme 24-hour Programming Competition: 15 edition (2021): 313 / 5561 (94<sup>th</sup> percentile); 11 edition (2017): 391 / 3350 (88<sup>th</sup> percentile); 9 edition (2015): 275 / 2035 (86<sup>th</sup> percentile); 8 edition (2014): 536 / 1853 (71<sup>th</sup> percentile).

\*Note: editions 11 and 15 I participated alone (normally is in teams of 3)

ITBA electronics exhibition: 3 times awarded as best project by several companies including Schneider Electric

IEEEExtreme Practice ITBA (2017): 2 / 15 (93<sup>th</sup> percentile)

Argentinian Math Olympiad (OMA): Invictus. Several times participant

## Technical Skills

Languages: Spanish (native), English (Cambridge C1 CAE & TOIEC 940/990), French (DEL F A2 & TFC B2)

Programming Languages: Python (Tensorflow, Pandas), C/C++, Java, Matlab, Web (Angular, JS, TS, HTML, CSS)

Technologies/Frameworks: Linux, Git, Docker, reStructuredText, K8s