# JOSE AGUSTIN BARRACHINA

### **EXPERIENCE**

#### **ONERA**

#### PhD Thesis at Ecole CentraleSupelec

• Complex-Valued Neural Networks for PolSAR applications.

#### **CNRS**

#### **Laboratory of Subatomic Physics & Cosmology**

Fast electronics & data acquisition for Mimac-FastN

#### Cisco Systems

#### **Service Provider for AMX**

Movember 2017 - April 2018

Buenos Aires, Argentina

• Software System Engineer Intern

### Intituto Tecnológico de Buenos Aires

#### **Neural Networks teaching assistant**

August 2017 - December 2017

Buenos Aires, Argentina

 Teaching assistant the course Neural Networks where several lectures where given, corrected exams and works and helped with the organization of the course itself.

## **SOFTWARE PROJECTS**

#### **CVNN**

#### **Complex-Valued Neural Networks tool for Python**

Cotober 2019 - Currently supported

Library to help implement a complex-valued neural network (cvnn) using tensorflow as back-end

#### Anime DCGAN

#### Al using a Deep Convolutional Generative Adversarial Network

Harmonia July 2018 - August 2018

Anime faces generation Al programmed on Python

#### LipSync

#### Voice processing Python project with GUI

August 2017 - December 2017

Implementation of a Recursive Neural Network (RNN) to detect phonemes on an speaking audio & other voice processing techniques

#### Forbidden Desert

#### C++ Project with GUI (Over 7k lines of code)

August 2015 - December 2015

Videogame implementation of *Forbidden Dessert*, a 2 player board game playable over LAN connection

## **EDUCATION**

#### **ITBA**

# Electronic Engineering focus on Signal Processing

March 2012 - July 2018

Performance: 7.14 / 10 (top 2 over 26)

### École Polytechnique

#### **International Exchange Program**

march 2016 - March 2017

## **COMPETITIONS**



Hackathon J.P. Morgan - ITBA  $3^{rd}$  prize over 20 participants



ITBA electronics exhibition

3 times participant awarded by several companies as the **best project** 



# IEEEXtreme 24-Hour Programming Competition

- IEEEXtreme 11.0 position 391 over 3350 (percentile 88)
- IEEEXtreme 9.0 position 275 over 2035 (percentile 86)
- IEEEXtreme 8.0 position 536 over 1853 (percentile 71)



**IEEEXtreme Practice IEEE - ITBA** position 2 over 15 (percentile 87)



Argentinian Math Olympiad
Participation many years in a row

## **PROGRAMMING**

Java Python Matlab C/C++ VHDL Assembly

**OCaml** 



## **LANGUAGES**



Spanish

Native



English

- C1 CAE Cambridge
- TOIEC score: 940 / 1000



French

- A2 French Alliance (DELF)
- B2 TCF