# Pablo Suárez

Universidad Complutense de Madrid & École Polytechnique Fédérale de Lausanne



# About me

As a big fan of drawing and data science, and after reconciling my creative side with my technical skills, I began to cultivate a significant interest in using Deep Learning for Computer Vision and Wireless Communications. I completed two programming-focused internships, earning honors in one, while maintaining a 77% average GPA in my final year and concurrently working on my Bachelor's thesis. I'm always looking for new programming challenges and I am interested in Ray Tracing, Physical Layer Communications and Deep Learning. I also enjoy languages, going to the gym and contributing to Sionna.

# Education

- 2014–2018 **High School Diploma**, Sagrado Corazón Reparadoras High school, Majadahonda, Madrid, Spain
- 2018–2023 Bachelor of Science in Electronics and Telecommunications Engineering, Complutense University of Madrid, Madrid, Spain

  Telecommunications | Electronics | Deep Learning 🗘 🖨 | Wireless Communications
- 2021–2022 Electrical and Electronics Engineering, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland Exchange student | Bachelor courses | Master courses | Semester project (5/6)
- 2022–2023 **Deep Learning specialization**, *Coursera*, Artificial Intelligence, Neural Networks Logistic Regression | Gradient Descent | Machine Learning | Neural Network Design | Python
- 2023–2024 Data Science Program, Universitat Oberta de Catalunya
  Data mining (9/10) 🗘 | Programming for Data Science (9.143/10) 🗘

# Experience

# Volunteering

12/2016- Academic aid and private classes, Sagrado Corazón Reparadoras School, Majadahonda, 03/2017 Autonomous Community of Madrid, Tutoring and academic support to primary school students with special needs (unpaid)

### Work Experience

- 02/2022 Technical Engineering, EPFL Rocket Team, Lausanne, Switzerland, Antenna and Mi-07/2022 crowave Engineering
  - Project: Design of a circularly Polarized Patch Antenna in the band of 868-869 MHz for the Ground team. (5/6)
- 02/2023 Internship, Instituto Geográfico Nacional de España, Madrid, Spain, Python Programming 04/2023 Project: Extraction of attributes for characterization and categorization of a seismic record. The extracted attributes can be divided into three categories: purely statistical description of the amplitude of the register, spectral description and polarity. The set of these features can serve as training for machine learning methods that allow the classification of events. (Hons) •

- 04/2023 Internship, Telefónica, Madrid, Spain
- 08/2023 RAN Innovation Analyst intern. Open RAN and New Radio solutions team based in Madrid (Spain) within the Global Access area of the Chief Technology Office (GCTIO) of Telefónica.
- 08/2023- R&D O-RAN Engineer, Telefónica R&D, Madrid, Spain
  - today RAN Innovation. Open RAN and New Radio solutions team based in Madrid (Spain) within the Global Access area of the Chief Technology Office (GCTIO) of Telefónica.

#### Contributions:

- Open6G: research about Reconfigurable Intelligent Surfaces in future 6G networks.
- BeGreen: software development for wireless communications, launching simulations with Sionna, TensorFlow and Keras, and analyzing data with Pandas and other frameworks.

#### Key activities:

- MIMO research with AI/ML simulators such as Sionna (Python).
- Data analysis.
- Analysis of new technical enablers in 6G.
- Analysis of new capabilities in RAN related to different 3GPP releases and O-RAN specifications.
- Support on RAN activities in lab (logistics, setup, test plans)

## Certifications

- 09/2022 Deep Learning specialization, Coursera, Remotely, Madrid, Spain
- 11/2023 Completed courses (full certificate  $\blacksquare$ ):
  - Deep Learning and Neural Networks.
  - Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization.
  - Structuring Machine Learning Projects.
  - Convolutional Neural Networks.
  - Sequence Models.
- $02/2023 \ \, \textbf{Supervised Machine Learning specialization}, \textit{Stanford University and Coursera}, \textit{ results of the control of the course o$
- 02/2023 motely, Madrid, Spain.

## Completed courses:

- Regression and Classification
- 09/2023 Data Science specialization, IBM and Coursera, remotely, Madrid, Spain.
- 09/2023 Completed courses:
  - What is Data Science

# Computer Skills

- Coding Python, Sionna, R, Matlab, C, C++, LATEX, Vivado HLS, Assembly language, Bash, Tensor-Flow, Matplotlib, Obspy, Keras, NumPy, Pandas, PIL, Docker
- Microsoft Word, Excel, Powerpoint and Teams
- Simulators PSPICE, Ansys HFSS, Microwave Office, LTSPice, GNU Radio, Microwind, Xilinx
- Digital Slack, GitHub, Linkedln, Infojobs, Monday, Stack Overflow, Notion

Platforms

# Languages

Spanish Native

English C1

French B2-C1

Catalan B2