

ARNAU SAUMELL

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📍 Barcelona, Spain

in arnau-saumell

EDUCATION

National Baccalaureate

Aula Escola Europea

📅 September 2016 – June 2018

Grade : 8.21

International Baccalaureate

Aula Escola Europea

📅 September 2016 – June 2018

Grade : 9.00

BS in Mathematics and Data Science

Universitat Politècnica de Catalunya UPC

📅 September 2018 – June 2023

Grade : 7.93

EXPERIENCE

Deep Learning Intern

Starlab - Neuroscience

📅 July 2021 - September 2021

📍 Barcelona, Spain

- Developed the *LSTM Autoencoders for EEG artifact detection and removal* project, under the supervision of Dr. Aureli Soria-Frisch.
- Performed neurological signal (EEG) processing using LSTM Autoencoding Neural Networks for rare events detection and correction.

Machine Learning Intern

Informatics and Robotics Institute IRI

📅 September 2020 - June 2021

📍 Barcelona, Spain

- Developed the *TASC: Topological Analysis of Simulated Cloth manipulations* project, leaded by Dr. Fabio Strazzeri.
- Performed statistical analysis over a representation of deformable materials based on combinatorial topology.
- Implemented Machine Learning approaches in order to achieve a stratification of cloth deformation for further robotic manipulation.

Research Intern

Institute of Photonic Sciences ICFO

📅 June 2017 – July 2017

📍 Barcelona, Spain

- Collaboration in the Theoretical Quantum-Nano Photonics group, supervised by Prof. Darrick Chang.
- Focused on the development of a Fourier-transformation-based algorithm for image compression.

PROJECTS

GPS Telegram bot (Academic Project)

Python, Telegram

📅 May 2019 – June 2019

- Developed a Telegram bot (programmed with Python) providing live-location guidance.
- Provides detailed instructions on the fastest path leading to a demanded destination.

PROGRAMMING SKILLS

C++

Python

R

SQL

Matlab

HTML

CSS

JavaScript

Bootstrap

Git

Latex

Ms Office

TECHNICAL SKILLS

- Machine Learning
- Time Series
- Multivariate analysis
- Optimization
- Signal processing
- Statistics
- Pure Mathematics

ACHIEVEMENTS

- Academic scholarship for full tuition at Aula Escola Europea (HS) 2016
- Finalist in the National Olympiad in Informatics 2017
- Finalist in the National Olympiad in Physics 2017
- Academic scholarship for full tuition at CFIS-UPC (University) 2018

LANGUAGES

- **Spanish** - Native
- **English** - Full professional proficiency (Cambridge Certificate in Advanced English)
- **Catalan** - Native

OTHER INTERESTS

- **Teaching:** private individual teacher, University academy teacher
- **Programming Challenges:** Datathons, Codeforces, Kaggle
- **Sports:** Federated Basketball player; U-14, U-16 & U-18 Basketball Coach