

ARNAU SAUMELL

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📍 Barcelona, Spain

🔗 My homepage

in arnau-saumell

EDUCATION

BS in Mathematics and Data Science

Universitat Politècnica de Catalunya UPC

📅 September 2018 – June 2023

Grade : 8.0

Majoring in both degrees enrolled in an excellence national scholarship program

National Baccalaureate

Aula Escola Europea

📅 September 2016 – June 2018

Grade : 8.2

International Baccalaureate

Aula Escola Europea

📅 September 2016 – June 2018

Grade : 9.0

EXPERIENCE

Deep Learning Intern

Starlab - Neuroscience

📅 July 2021 – September 2021

- 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 for rare events detection and correction (**Denoising Autoencoders**).

Machine Learning Intern

Informatics and Robotics Institute IRI

📅 September 2020 – June 2021

- Developed the **TASC: Topological Analysis of Simulated Cloth manipulations** project, led 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

- 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**.

PROGRAMMING SKILLS

C++

Python

R

SQL

Matlab

HTML

CSS

JavaScript

Bootstrap

Git

Latex

Ms Office

RELEVANT COURSES

- Deep Learning
- Reinforcement Learning
- Machine Learning
- Image Processing
- Signal processing
- Time Series
- Statistics
- Differential Equations

ACHIEVEMENTS

- First place in *The Barcelona Challenge - FME datathon* 2021
- **Academic scholarship** for full tuition at CFIS-UPC (University) 2018
- Finalist in the **National Olympiad in Informatics** 2017
- Finalist in the **National Olympiad in Physics** 2017
- **Academic scholarship** for full tuition at Aula Escola Europea (HS) 2016

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