

# MARTÍ PEDEMONTE BERNAT

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## Personal Profile

I am a highly motivated and adaptable individual with a strong curiosity and a passion for learning. My experiences at ETHZ and MIT have enhanced my creative thinking, analytical abilities, programming, and problem-solving skills. I thrive on challenges, viewing them as essential for both professional and personal growth. In the dynamic world of data science, my analytical and programming skills are key to uncovering insights and guiding decisions. I am eager to turn complex data into practical solutions, ready for the field's unique challenges and opportunities. Outside of work, I find joy in reading, engaging in sports, and travelling to discover new places, cultures, and people.

## Experience

- 05/2023 - 12/2023 **Massachusetts Institute of Technology (MIT) - Research Assistant** **Cambridge, MA**
- Analysed decays of the Higgs boson into a photon and a  $\phi$ ,  $\omega$  or  $D^{*0}$  meson. (Python, C/C++, Bash, Data Analysis, ML)
- 09/2019 - 01/2022 **Universitat de Barcelona (UB) - Undergraduate Research Assistant** **Barcelona, Spain**
- Studied ITO nanowires on silicon substrates, co-authored a published paper. (Python, Data Analysis)
  - Assembled an apparatus for producing and detecting polarization-entangled photons. (Python, C, Data Analysis)
  - Developed a ML software to assist in prescribing treatments for a fertility company. (Python, Data Analysis, ML)
- 01/2019 - 02/2020 **Resistencias Tope S.A. - Data Scientist** **Barcelona, Spain**
- Part-time developed analytical models for estimating the temperatures of molten salts, culminating in a field trip to Abengoa's solar power plant in the Atacama Desert, Chile. (Python, Excel, Data Analysis)

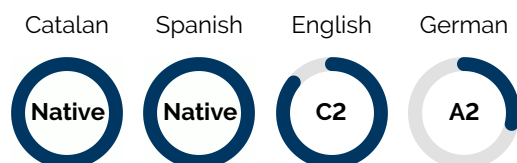
## Education

- 05/2023 - 10/2023 **Massachusetts Institute of Technology (MIT) - Master's Thesis in Particle Physics**
- In rare decays of the Higgs boson into a photon and a  $\phi$ ,  $\omega$  or  $D^{*0}$  meson.
- 09/2021 - 10/2023 **ETH Zürich - MSc ETH in Physics** **GPA: 5.6/6**
- Specialised in Theoretical Physics: QFT, Particle Physics, EFTs and GR.
- 09/2016 - 07/2021 **Universitat de Barcelona (UB) - BSc in Computer Science and Software Engineering** **GPA: 9.3/10**
- 09/2014 - 07/2020 **Universitat de Barcelona (UB) - BSc in Mathematics** **GPA: 8.4/10**
- 09/2014 - 01/2020 **Universitat de Barcelona (UB) - BSc in Physics** **GPA: 8.5/10**

## Awards

- [2021](#) La Caixa Fellowship for postgraduate studies at ETH Zürich, among more than 1300 candidates.
- [2021](#) Extraordinary Award for outstanding academic performance in the BSc in Computer Science.
- [2021](#) Joaquim Font Award for being the top-ranked student in my BSc in Computer Science graduating class.
- [2014-2021](#) Excellent with honours in 22 courses across the three BSc programs at UB.
- [2012-2014](#) Mathematical Kangaroo Competition (>6000 participants): 2012 - Top 1.9%, 2013 - Top 0.6%, 2014 - Top 0.7%.

## Languages



## Relevant projects

- [2023](#) Ready Trader Go algorithmic trading competition.
- [2023](#) Fantasy football player value modelling.
- [2021](#) Python package to compute causal effect probabilities.

## Technical skills

**Proficient** Python, C++, Bash, Latex, Excel, Java, C.  
**Familiar** HTML+JS+CSS, SQL, Dart&Flutter, R.

## Additional information

- [2015-2019](#) Speaker in University orientation sessions in High School.
- [2012-2021](#) Private teacher for students in High School and University (Mathematics, Physics, Computer Science, Statistics, Chemistry, Engineering).

