

# Miquel Sirera Perelló

PH.D. STUDENT

Boston, Massachusetts

+1 (617) 708-6010 · +34 619 364 359 | ✉ sirera.m@northeastern.edu | 🏠 mqsirera.github.io | 📧 mqsirera | 🌐 mqsirera

## Education

### Northeastern University

Boston, Massachusetts

PH.D. STUDENT IN COMPUTER ENGINEERING - CURRENT

Jan 2024 - Dec 2028

- **Research Interests:** Machine Learning, Large Language Models, Distributed Training/Inference Systems, Machine Learning for Wireless Communications
- **Advisor:** co-advised by Prof. **Stratis Ioannidis** and Prof. **Kaushik Chowdhury**

### Northeastern University

Boston, Massachusetts

MSC DEGREE IN ELECTRICAL AND COMPUTER ENGINEERING - CURRENT

Jan 2024 - Dec 2025

- **Concentration:** Computer Vision, Machine Learning and Algorithms

### Universitat Politècnica de Catalunya

Barcelona, Spain

BSC IN DATA SCIENCE AND ENGINEERING

Sept 2019 - July 2023

- Graduated with a GPA of **8.89/10**
- **Relevant coursework:** Algorithmics, Object-Oriented Programming, Artificial Intelligence, Databases, Computer Architecture
- Received **honors** in four courses: Discrete Mathematics and Logic, Mathematical Optimization, Search and Analysis of Information, and Advanced Topics of Data Science

### La Salle Bonanova

Barcelona, Spain

HIGH SCHOOL DIPLOMA

Sept 2017 - June 2019

- Graduated with honors, achieving a score of **13.556/14** in the university entrance exams (PAU), earning the **PAU distinction**
- Participated in math contests such as **Pangea** and **Fem Matemàtiques**
- Engaged in advanced enrichment math classes

## Experience

### GENESYS Lab, Northeastern University

Boston, Massachusetts

UNDERGRADUATE RESEARCHER

Feb 2023 - July 2023

- Bachelor's thesis in the GENESYS lab under the supervision of Prof. **Kaushik Chowdhury**
- The project focused on developing **AI-driven approaches** in the realm of **signal classification** for wireless communications

### Abi Global Health

Barcelona, Spain

AI ENGINEER INTERN

Mar 2022 - Dec 2022

- Enhanced **monitoring capabilities** within the **MLOps** framework
- Supported the AI Lab by developing new **machine learning models** and refining existing solutions

## Programs

### Naptilus Tech Lab

Barcelona, Spain

BECO: A TOOL TO BOOST ENVIRONMENTALLY CONSCIOUS DECISIONS

Feb 2022 - June 2022

- Developed a software solution addressing the challenge of leveraging extensive user data to mitigate individual **carbon footprints**
- Created "BECO," an innovative application using advanced **machine learning** techniques to guide users towards environmentally conscious establishments

### Fundació Catalunya La Pedrera

Barcelona, Spain

CRAZY ABOUT MATHEMATICS

Jan 2018 - Dec 2018

- One-year course for A-level Science and Technology students with a special interest and talent for mathematics

## Publications

---

### PUBLISHED

#### **Neural Point Processes for Pixel-wise Regression**

Chengzhi Shi, Gözde Özcan, **Miquel Sirera Perelló**, Stratis Ioannidis  
*AISTATS 2025* (presented)

#### **JARVIS: Disjoint Large Language Models on Radio VLANs for Intelligent Services**

**Miquel Sirera Perelló**, Joshua Groen, Wan Liu, Stratis Ioannidis, Kaushik Chowdhury  
*IEEE MILCOM 2024* (presented)

#### **T-PRIME: Transformer-based Protocol Identification for Machine-learning at the Edge**

Mauro Belgiovine, Joshua Groen, **Miquel Sirera Perelló**, Chinenye Tassie, Sage Trudeau, Stratis Ioannidis, Kaushik Chowdhury  
*IEEE INFOCOM 2024*

#### **MEGATRON: Machine Learning in 5G with Analysis of Traffic in Open Radio Access Networks**

Mauro Belgiovine, Jerry Gu, Joshua Groen, **Miquel Sirera Perelló**, Utku Demir, Kaushik Chowdhury  
*ICNC 2024*

#### **Deep Learning for Wireless Communications**

**Miquel Sirera Perelló**, Kaushik Chowdhury, Albert Cabellos-Aparicio  
*Bachelor Thesis, 2023*

### IN REVIEW

#### **CAMP: Communication-Aware Neural Mapping and Pruning**

**Miquel Sirera Perelló**<sup>\*</sup>, Ayberk Yarkin Yıldız<sup>\*</sup>, Theodoros-Thirimachos Davarakis<sup>\*</sup>, Hulya Seferoglu, Kaushik Chowdhury, Stratis Ioannidis

### OTHER

Conference Participation: Attended the International Conference on Learning Representations (ICLR 2025), Singapore

## Honors and Awards

---

#### **June 2019 PAU Distinction**, Government of Catalonia

Awarded for achieving a score above 9 out of 10 in the university entrance exams (PAU)

## Extracurricular

---

#### **2021-2024 Participant**, Datathons and Hackathons

Participated in programming competitions including the **UPC Datathon** and the **Google Hash Code** on two occasions

#### **2018-2019 Spanish Teacher**, SpainBCN-Programs

Taught Spanish to foreign students during two summer programs, engaging with individuals from diverse cultural backgrounds

#### **2015-2019 Volunteer**, Community Service

Volunteered at a residence for the elderly with *La Congregación de las Hermanitas de los Pobres* and assisted elderly and disabled

#### **2015-2017 Assistant Coach**, La Salle Bonanova

Served as a soccer assistant coach for young boys over two seasons, fostering teamwork and sportsmanship

## Skills

---

**Programming Languages:** Python, C++, R, SQL, MATLAB, Java, AMPL

**Tools/Platforms:** Git, Linux, MLOps frameworks

**Soft Skills:** Critical thinking, Problem-solving, Collaboration, Fast learning, Adaptability, Time management, Organization

**Languages:** Catalan (Native), Spanish (Native), English (Proficient)