

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

Professional Summary

Ph.D. student in Computer Engineering at Northeastern University with research interests in Large Language Models (LLMs), distributed AI systems, and machine learning for wireless communications. Experienced in developing and publishing cutting-edge research at top-tier conferences, with contributions spanning LLM deployment, distributed training and inference, and AI-driven signal processing. Skilled in Python, C++, and MLOps frameworks, with strong experience collaborating in interdisciplinary research teams. Passionate about advancing the scalability and efficiency of intelligent systems, with the long-term goal of driving innovation at the intersection of machine learning and distributed systems.

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

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)

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 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^{*}, Ayberk Yarkin Yıldız^{*}, Theodoros-Thirimachos Davarakis^{*}, Hulya Seferoglu, Kaushik Chowdhury, Stratis Ioannidis

OTHER

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

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

2015-2019 Volunteer, Community Service

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

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)