Miquel Sirera Perelló

PH.D. STUDENT

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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, 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 2026*
- **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

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

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

Neural Point Processes for Pixel-wise Regression
Chengzhi Shi, Gözde Özcan, **Miquel Sirera Perelló**, Stratis Ioannidis

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)