PHD STUDENT IN COMPUTER ENGINEERING AT NORTHEASTERN UNIVERSITY

MIQUEL SIRERA PERELLÓ

DETAILS

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COMPUTER SKILLS

Experience with several programming languages

- C, C++
- Python
- SQL
- Matlab
- R
- Java

LANGUAGES

- Catalan – Native
- Spanish – Native
- English – Cambridge Advanced (Grade A)

SKILLS

- Critical Thinking & Problem Solving
- Ability to Work in a Team
- Fast Learner
- Commitment
- Effective Time Management

CONFERENCES

- I have presented at AISTATS 2025, MILCOM 2024 and attended ICLR 2024.

PROFILE

I am a motivated graduate with a bachelor's degree in Data Science and Engineering from Universitat Politècnica de Catalunya. My academic journey has equipped me with a strong foundation in computer science, mathematics, statistics, and signal processing. Having recently completed my degree, I am now driven by a profound aspiration to further my knowledge and make significant contributions to the field of Computer Engineering through the pursuit of a Ph.D. I am enthusiastic about engaging in cutting–edge research in AI, pushing the boundaries of technological innovation, and making a meaningful impact. With a proactive work ethic and a dedication to academic excellence, I am excited to embark on an advanced academic path and play a role in shaping the future of computer engineering.

EXPERIENCE

GENESYS LAB AT NORTHEASTERN UNIVERSITY, BACHELOR'S THESIS DEVELOPMENT

FEBRUARY 2023 – JULY 2023

While developing my Bachelor's thesis, I worked alongside a research team at the university focused on integrating Artificial Intelligence into wireless communications. This group is part of the Institute for the Wireless Internet of Things, and their primary goal is to create advanced solutions for wireless communication challenges. In this context, I was responsible for devising and implementing AI–driven approaches, specifically in the realm of signal classification. This experience solidified my understanding of AI's impact on wireless technologies and fueled my enthusiasm for contributing further to this evolving field.

ABI GLOBAL HEALTH, AI LAB INTERN

MARCH 2022 – DECEMBER 2022

I completed an internship at a prominent global telehealth company, where I played a pivotal role in advancing monitoring capabilities within the MLOps framework. In addition, I provided valuable support to the AI Lab by contributing to the creation of novel machine learning models and enhancing pre–existing solutions.

ENGINEERING PROJECT – BECO

FEBRUARY 2022 – JUNE 2022

I successfully executed the development of a software solution for Naptilus Tech Lab, addressing a complex challenge centered around leveraging extensive user data to mitigate individual carbon footprints. The outcome of our efforts materialized as "BECO", an innovative application service meticulously crafted using advanced machine learning techniques. This platform adeptly guided users by suggesting environmentally conscious establishments, underscoring our commitment to fostering sustainable choices.

EDUCATION

PH.D. STUDENT IN COMPUTER ENGINEERING, NORTHEASTERN UNIVERSITY, BOSTON
JANUARY 2024 – PRESENT

As a Ph.D. candidate in Computer Engineering at Northeastern University, my research focuses on the intersection of Machine Learning, Large Language Models (LLMs), Distributed Training and Inference, and Edge AI. I am deeply interested in advancing core AI methodologies, innovating solutions that make models more resilient and robust, and exploring how edge/cloud devices can be optimized to support AI systems through efficient distributed inference and scalable deployments. At the same time, I investigate how AI can transform telecommunications by improving network performance and automating resource management. I am particularly drawn to LLMs, with a focus on the attention mechanism and the challenges of knowledge representation and editing. Ultimately, my goal is to shape the future of AI by designing efficient, holistic systems that seamlessly integrate intelligence, scalability, and resilience.

BACHELOR'S DEGREE IN DATA SCIENCE AND ENGINEERING, UNIVERSITAT POLITÈCNICA DE CATALUNYA, BARCELONA
SEPTEMBER 2019 – JULY 2023

Recently graduated with a strong academic record, I proudly achieved an exceptional GPA of 8.89 out of 10 in my bachelor's education, demonstrating my unwavering commitment to academic excellence. Particularly noteworthy, I earned honorific distinctions in four rigorous courses: Discrete Mathematics and Logic, Mathematical Optimization, Search and Analysis of Information, and Advanced Topics of Data Science.

Alongside my coursework, I actively honed my practical skills by participating in esteemed programming competitions, including both the UPC Datathon and the Google Hash Code in two separate occasions. These experiences, supported by sponsorship from major tech industry players, have fortified my problem-solving prowess, teamwork skills and underscored my dedication to pushing the boundaries of knowledge and innovation.

HIGH SCHOOL, LA SALLE BONANOVA, BARCELONA
SEPTEMBER 2017 – JUNE 2019

I graduated with honors, achieving a remarkable score of 13.556 out of 14 in the university entrance exams (PAU). This accomplishment earned me the prestigious PAU distinction. Additionally, I actively participated in various math contests, including Pangea and "Fem Matemàtiques", further underscoring my commitment to academic excellence. My enthusiasm for mathematics led me to engage in advanced enrichment math classes, which significantly enriched my mathematical insights and skills.

EXTRA-CURRICULAR ACTIVITIES

ASSISTANT COACH, LA SALLE BONANOVA, BARCELONA
SEPTEMBER 2015 – JUNE 2017

I also had the privilege of serving as a soccer assistant coach for young boys over the course of two seasons. This experience allowed me to actively engage with the enthusiastic young athletes, imparting valuable skills and fostering a sense of teamwork and sportsmanship.

VOLUNTEER ACTIVITIES
SEPTEMBER 2015 – JUNE 2019

During Middle and High School, I volunteered at a residence for the elderly with "La Congregación de las Hermanitas de los Pobres" and assisted elderly individuals and people with disabilities in Lourdes, France. These experiences deepened my commitment to positively impacting others' lives.

SPANISH TEACHER, SPAINBCN-PROGRAMS, BARCELONA
JULY 2018 & JULY 2019

For two summers, I taught Spanish to foreign students, connecting with individuals from diverse cultures. This experience fostered meaningful interactions and a deeper appreciation for global diversity through language and cultural exchange.