

Lluc Santamaria Riba

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Profile

Computer Science student at UPC (ranked 1st of 400, GPA 9.25/10), currently on exchange at EPFL. I apply my research in compiler engineering and HPC to build robust systems that are secure, efficient, and robust. I am dedicated to democratizing AI and strengthening the open-source ecosystem.

Experience

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| Scala Center , Research Assistant <ul style="list-style-type: none"> Designed divergence check algorithm for Match Types in Scala 3 compiler Supervised by Martin Odersky (Scala creator and javac author) and Matthieu Bovel Prevented compiler crashes by replacing recursion limits with termination proofs | Lausanne, CH
Sep 2025 – Present |
| Investment Society Lausanne , Student Association - IT Market Analyst <ul style="list-style-type: none"> Collaborated in five-person team to identify undervalued tech stocks. Successfully defended Melexis and Magyar pitches before 50+ members | Lausanne, CH
Sep 2025 – Jan 2026 |
| Barcelona Supercomputing Center , Summer Internship - LLM Researcher <ul style="list-style-type: none"> Fine-tuned and evaluated a CodeLlama-based model on the MareNostrum 5 supercomputer to generate PyCOMPSs-parallelized code Updated and expanded the repository of PyCOMPSs examples, making it a solid foundation for training Designed and implemented a dataset generation pipeline, fully automated Gained expertise in distributed computing, cluster execution, and reproducibility | Barcelona, ES
Jul 2025 – Aug 2025 |
| Eixos Creativa , Creative Technology Instructor <ul style="list-style-type: none"> Taught extracurricular creative technology program to 10–12-year-olds Led activities that promoted collaboration, creativity, and STEM engagement | Barcelona, ES
Apr 2025 – Jun 2025 |
| ALBA Synchrotron , Software Engineer Intern <ul style="list-style-type: none"> Developed web applications using Django, RESTful API, and AngularJS Worked in Agile Scrum methodology and used CI/CD technologies Helped to automate and speed up enterprise internal processes | Cerdanyola del Vallès, ES
Oct 2024 – Apr 2025 |
| Barcelona School of Informatics (UPC) , Lecturer in Mathematics (Scholarship) <ul style="list-style-type: none"> Delivered lectures on discrete mathematics to first-year university students. Served as the coordinator for some lecturers, ensuring alignment and consistency | Barcelona, ES
Feb 2024 – Jun 2024 |

Education

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|---|--------------------------------------|
| EX École Polytechnique Fédérale de Lausanne (EPFL) , Exchange Program <ul style="list-style-type: none"> Erasmus exchange program during 5th semester Awarded three scholarships for the exchange | Lausanne, CH
Sept 2025 – Present |
| BE Universitat Politècnica de Catalunya (UPC) , Computer Engineering <ul style="list-style-type: none"> Top 1 student of my cohort with a GPA 9.25/10 Honors in 16 courses Elected as delegate for three courses | Barcelona, ES
Sept 2022 – Present |

- HS Institut-Escola Frederic Mistral**, Technological High School
- Achieved honors in the university entrance exams (grade 12.7 out of 14)
 - Completed high school with distinction (grade 8.72 out of 10)

Barcelona, ES
Sept 2020 – June 2022

Awards and Scholarships

Universitat Politècnica de Catalunya (UPC), Highest GPA Award

- Ranked #1 of nearly 400 students in the first two years of the degree program

Heyning-Roelli Foundation, Exchange Scholarship

- Competitive merit-based scholarship supporting exchange studies at EPFL.

Fundación Banco Santander, Exchange Scholarship

- Merit-based scholarship awarded to top Spanish university students for international exchange at EPFL

SUI Hackathon, Winner

- Winner at the SUI Foundation Hackathon 2025 (Lausanne) for the Healix blockchain project

Minister of Research and Universities, Honor Letter

- National recognition for outstanding results in the university entrance exams

Projects

Healix, SUI Hackathon Winner Project

tinyurl.com/SUIHacking 

- Decentralized platform for sharing emotions securely on the Sui blockchain
- On-chain encryption using SEAL and Move smart contracts.

Snap2Shop, HackUPC, Inditex Challenge

tinyurl.com/HackUPC 

- Computer Vision solution for visual search of fashion clothes

Volunteering

Anegx, Viu la natura al Parc Natural de la Garrotxa

Olot, ES

- Forest conservation, community work, and awareness activities in the volcanic area

Jul 2021

Fundesplai, Recuperem el patrimoni de la Vall de Sau

Vilanova de Sau, ES

- Forest restoration, wildlife monitoring, maintenance, and signposting of hiking trails

Jul 2020

El Teix, Muntanyes del Terraprim

Viladamat, ES

- Restoring fire-damaged forests and connecting cultural heritage sites

Jul 2019

Languages

- **Catalan and Spanish:** Native
- **English:** Proficient. Cambridge English C1 Advanced, Score: 183

Technologies

- **Programming:** Python, C++, C, Java, Scala, Haskell, SQL, JavaScript, HTML, CSS, Bash
- **Frameworks & Libraries:** Django, React, AngularJS, Flutter, PyTorch, Numpy, Scikit-learn
- **Parallel/Distributed:** OpenMP, COMPSs, AsyncIO.