

Xiana Carrera

PhD student in Computer Science at Columbia University
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EDUCATION

Columbia University , USA	To start September 2025
PhD in Computer Science with a focus on Geometry Processing, supervised by Silvia Sellán.	
Universidade de Santiago de Compostela , Spain	September 2019 July 2025
Bachelor in Informatics Engineering. Average grade: 9.81/10.	
Universidade de Santiago de Compostela , Spain	September 2019 July 2025
Bachelor in Mathematics. Part of the Student Council, acting as a student representative. Average grade: 9.61/10.	
Università degli Studi di Genova , Italy	September 2023 July 2024
Erasmus study abroad program. Completed 6 Bachelor courses (39 ECTS) and 4 Master courses (27 ECTS). Average grade: 29.9/30.	
Università della Svizzera italiana , Switzerland	September 2022 September 2023
Bilateral exchange study abroad program. Completed 5 Bachelor courses (27 ECTS) and 5 Master courses (27 ECTS). Average grade: 10/10.	

ACADEMIC EXPERIENCE

CiTIUS - Universidade de Santiago de Compostela	Santiago de Compostela, Spain
Research Collaborator	September 2024 July 2025
<ul style="list-style-type: none">• Researched retrieval and search technologies to deal against misinformation in the field of health-related queries.• Worked with a variety of Natural Language Processing, Deep Learning and Machine Learning models.• Supervised by Professor David Enrique Losada Carril.	
Università della Svizzera italiana	Lugano, Switzerland
Summer Research Intern	July 2023 August 2023
<ul style="list-style-type: none">• Researched the improvement of foveated rendering techniques in application to Neural Radiance Fields (NeRFs).• Heavy use of Deep Neural Networks and Image Processing.• Received competitive scholarship - Undergraduate Research Opportunities Program.• Supervised by Professor Piotr Didyk.	

INDUSTRY EXPERIENCE

Ozona Tech	Santiago de Compostela, Spain
Summer Intern	June 2022 August 2022
<ul style="list-style-type: none">• Performed Data Analysis for Big Data through Elasticsearch using Apache Spark.• Designed new Machine Learning algorithms in Python to optimize results.• Secondarily, worked in improving the performance of an Android mobile application.	

VOLUNTEERING

ACM SIGGRAPH

Student Volunteer

Denver, USA

July 2024 | August 2024

- Provided operational support to the SIGGRAPH 2024 conference at Denver, Colorado.
- Took a variety of roles helping exhibitors, attendees and the organization of the event.

PUBLICATIONS

Generating Effective Health-Related Queries for Promoting Reliable Search Results

ACM SIGIR 2025, short paper.

Xiana Carrera, Marcos Fernández-Pichel, and David E. Losada.

SKILLS

- **Programming:**
 - *Most proficient:* Python, C, C++, R, Java, SQL, JavaScript, HTML, CSS, NodeJS.
 - *Familiar:* C#, Fortran, Solidity.
- **Software:**
 - *Computer Graphics:* Blender, Three.js, WebGL, Unity.
 - *Data Analysis:* Cytoscape, Elasticsearch, Apache Spark, MongoDB, MySQL, Pandas, PostgreSQL, Tableau.
 - *Mathematics:* LaTeX, Matlab, Maple.
 - *Others:* Pytorch, TensorFlow, Git, Bootstrap, ExpressJS.
- **Languages:** Spanish (native), Galician (native), English (IELTS Academic: 8.0 - C1), French (upper intermediate), Italian (upper intermediate).

AWARDS AND MERITS

Ángela Ruiz Robles Award

2023, 2024

Student with the highest grades in the Double Bachelor cohort during the years 2021-2022 and 2022-2023.

Honors in 23 courses of Informatics Engineering Bachelor

2019-2024

Graduated with honors in 23 courses: Algorithms and Data Structures, Databases I and II, Software Design, Computer Architecture, Machine Learning, etc.

Remark: no honors were received from courses taken in Switzerland, since the university does not award this distinction.

Honors in 25 courses of Mathematics Bachelor

2019-2024

Graduated with honors in 25 courses: Differential Geometry, Probability and Statistics, Linear and Multilinear Algebra, General Topology, Complex Analysis, Fourier Analysis, Ordinary Differential Equations, etc.

ANEM-AMAT programming contest 2024

2024

Winner of the programming contest organized by the ANEM-AMAT association for Spanish undergraduate and graduate students in Mathematics, Statistics, and Data Science.

UniversityHack 2024

2024

Reached the Spanish national phase in the UniversityHack 2024 data analysis contest.

Emmy Noether Award

2023

Won contest for the creation of an educational video about Mathematics out of 200+ entries

Academic Excellence Award

2022

Student with the highest grades in the Double Bachelor cohort during the years 2020-2021.

Ada Byron Programming Contest	2022
Reached the Spanish national phase in the Ada Byron competitive programming contest.	
Extraordinary Bachillerato Award	2019
Recognition to the students with the best Bachillerato (high school) academic records in Galicia.	
Honors in Bachillerato	2019
Graduated with honors in Bachillerato.	

TALKS AND TEACHING

- **“Secrets of Algebra: Mathematics in Modern Cryptography”**. July 2025. Three-hour mini-course on cryptography and its connections with mathematics, particularly algebra, delivered as part of the summer school 2-ECTS course “Mathematical Horizons: A Journey Between Abstraction and Reality” at Universidade de Santiago de Compostela.
- **“Évariste Galois: An unscripted movie story”**. July 2025. Informative talk on the life of mathematician Évariste Galois, delivered as part of the educational outreach event “Non mates as mates”.
- **“Introduction to Python and Its Applications in Data Analysis”**. March 2025. 16-hour course given to Mathematics students at Universidade de Santiago de Compostela, covering the fundamentals of Python and key libraries for Data Analysis. Topics include data manipulation with NumPy and Pandas, visualization with Matplotlib and Seaborn, and basic machine learning concepts using scikit-learn.
- **“NeRFs: Representation of 3D scenes with AI”**. October 2024. Informative talk given as part of a cycle of public activities organized in preparation for the European Conference on Artificial Intelligence (ECAI 2024).

COURSES & EVENTS ATTENDED

Building AI	2023
Completed the online course “Building AI”, offered by the University of Helsinki, which teaches practical AI methods, including machine learning and neural networks.	
Introduction to AI	2023
Completed the online course “Introduction to AI”, offered by the University of Helsinki, which teaches the societal and philosophical implications of AI.	
Neural Networks and Deep Learning	2021
Completed Andrew Ng’s online course in Neural Networks and Deep Learning offered by DeepLearning.AI through Coursera.	
Data Visualization and Analysis with R	2021
Completed a 2-ECTS course organized at Universidade de Santiago de Compostela on the use of the R programming language for descriptive and inferential statistical analysis.	
Scientific Computing with Python	2020
Completed FreeCodeCamp’s online course that teaches some of the main Python tools and functionalities used in science.	
Introduction to Logic	2019
Completed a semester-long extracurricular course at Universidade de Santiago de Compostela about the formal theory of logic.	
“Ortega y Gasset” Summer Program	2019
Received a national scholarship to attend the “Ortega y Gasset” Summer Program at Universidad Internacional Menéndez Pelayo, which features lectures and activities about humanities, sciences and social sciences imparted by distinguished scholars, scientists and cultural figures.	