

Carla F. L. Martinez Becerra

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Education

Bachelor of Arts in Human Ecology Concentration in Civil & Environmental Engineering <i>College of the Atlantic</i> Honors: Shelby Davis Scholarship, College of the Atlantic UWC Scholarship, George E. Jonas–John Litsios Science Award (2025)	Expected Jun 2028 <i>Bar Harbor, ME</i> 3.9/4.0
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Research & Technical Experience

Research Assistant <i>Dept. Civil & Architectural Engineering, University of Miami</i>	Nov 2024 – Dec 2025 <i>Coral Gables, FL</i>
<ul style="list-style-type: none">Processed and harmonized utility infrastructure datasets to inform the International Code Council (ICC) 815 Standard (sizing of water distribution, sanitary drainage, and vent piping systems) committee workflowsLed geospatial and econometric analyses of residential water demand to aid the development of a framework to computationally determine the most efficient layout and pipe sizes for building plumbingBuilt Python notebooks for feature engineering and machine-learning models (regularized regression and tree-based) to identify and categorize high-resolution water demand determinantsCollaborated with faculty, PhD students, and postdoctoral fellows; conducted targeted literature reviews and designed metadata schemas/data dictionaries to ensure dataset joinability and reuse	
Research Assistant <i>Dept. Civil & Environmental Engineering, Florida International University</i>	Nov 2024 – Jan 2025 <i>Miami, FL</i>
<ul style="list-style-type: none">Installed, commissioned, and maintained in-situ monitoring stations (soil moisture/temperature and rainfall), configured dataloggers, sampling intervals, metadata, and verification checks for robust time-series capture in the Green Stormwater Infrastructure (GSI) projectPerformed constant-head infiltrometry to estimate field Saturated Hydraulic Conductivity (Ksat), both Falling and Constant Head Method, and parameterized infiltration for site-scale hydrologic modelsCollected and processed samples to quantify Total Suspended Solids (TSS) and Total Dissolved Solids (TDS) on infrastructureServed as acting GSI site lead, performing sensor calibration protocols, ensuring data precision, and overseeing the integrity of real-time monitoring systems	

Associate & Data Analyst <i>Community Energy Center, College of the Atlantic</i>	Sep 2024 – Jun 2025 <i>Bar Harbor, ME</i>
<ul style="list-style-type: none">Conducted comprehensive data processing for sustainability reporting for The Sustainability Tracking, Assessment & Rating System (STARS), enhancing transparency and accountability in energy and resource usePerformed hands-on insulation initiatives that minimize thermal energy loss and enhance the efficiency of building heating systemsDrafted and coordinated thermal energy efficiency grant proposals, securing funding for campus-wide sustainability upgradesLaunched and managed the 2025 Power Down Contest, incentivizing 32 COA houses to cut energy use, awarding a \$150 grant to the winning house based on normalized percentage reductions	

Publications & Manuscripts

1. Rich, D., Montás Bravo, L., Lin, Q., Lahiri, N., **Martinez Becerra, C.**, Andiroglu, E. *Determining Influential Factors of Residential Water Consumption Using Multi-Scale Geographically Weighted Regression* (Submitted; under review by Environment and Planning B: Urban Analytics and City Science, SAGE Publications)
2. **Martinez Becerra, C.**, Andiroglu, E. *Toward Data-Driven Water Demand Models: Lessons from Low-Resolution Analysis of Influential Factors* (Manuscript)

Conferences & Presentations

Upcoming Poster Presenter , “Precision and Scale: Evaluating Data Resolution and Spatially Adaptive Modeling for Resilient Water Demand Management,” Maine Sustainability & Water Conference	Mar 2026
Upcoming Attendee , Maine IDeA Data Science Conference	Feb 2026
Attendee , 50th Annual CIB W062 Symposium on Water Supply and Drainage for Buildings	Aug 2025
Presenter , “My hope for my country's future,” Amsterdam ILX Forum	Sep 2022

Fellowships & Grants

INBRE Research Grant , Maine IDeA Network of Biomedical Research Excellence (\$1,000)	Feb 2026
Student Initiative Fund , United World College Maastricht (€1,000)	May 2023

Awards & Honors

Aspire Leaders Program Scholar , Aspire Institute (Led by Harvard University faculty)	Feb 2026
Gold Award , The Duke Of Edinburgh International Award	May 2024
Rise For The World Finalist , Schmidt Futures & Rhodes Trust	Jun 2023
Full-ride Scholarship , United World College & UWC Peru NC	Sep 2022
Camp Rising Sun, Full-ride Scholarship , Louis August Jonas Foundation	Jul 2022
1st Place, Economics for Success Olympiad , Scotiabank & Junior Achievement	Nov 2021
Best Delegate, EducaMUN , Peruvian Association of United Nations Studies (AENU)	Feb 2021
Full-ride Scholarship , High Performance School of Lima (COAR Lima)	Mar 2020
1st Place, High School Mathematics Olympiad , IE Peruvian Airforce (FAP) José Quiñones	Nov 2019

Leadership & Program Development

Peer Career Coach (PCC) & Chair	Sep 2025 – Present
<i>Career Ecology Office, College of the Atlantic</i>	<i>Bar Harbor, ME</i>
<ul style="list-style-type: none">● Designed and launched DraftDrop (Nov 2025), COA's first centralized draft-intake and triage system that routes application materials to available coaches, preserves traceable feedback for seamless handoffs; used by 78% of COA students to date● Selected to the founding Peer Career Coaches (PCC) cohort, hosting weekly open hours as the first point of contact and providing career coaching and academic advising● Liaise across Registrar, Academic Services, Writing Center, Thorndike Library, Advancement and other campus services to streamline referrals and student support; assist with employer relations/recruiter visits and Career Connections Newsletter communications● Appointed Student Chair of the Student Opportunities and Accessible Research (SOAR) Program, co-developing a centralized platform that curates research, internship, fellowship, and study opportunities in collaboration with the Career Exploration Laboratory	

Founder, President & Executive Director <i>MenstruAction (Asociación MenstruAcción)</i>	Apr 2023 – Present Lima, PE
<ul style="list-style-type: none"> Lead a 30-member Board of Directors to advance gender equality by providing free, sustainable menstrual products to marginalized girls across Peru and bridging the gap between knowledge and medical access, and a multidisciplinary 3-pillar approach to menstrual, sexual and financial education Manage all organizational areas, including finances, legal compliance, programs & projects, sustainability and research, and public relations Awarded recognition of the RENOJ by Supreme Decree No. 001-2015 from the Peruvian Ministry of Education as a Juvenile NGO Spearheaded the development and implementation of Project Zapallal, executing MenstruAction's education program for 18 teenagers from the Casa Hogar Proyecto Perú shelter, empowering them with life-changing tools to support Zapallal's youth Coordinated the distribution of vital supplies, comprising food, hygiene products, learning materials, sustainable menstrual products, sports equipment, and educational resources, positively impacting the health and well-being of the 42 children at Casa Hogar Proyecto Perú Established strategic partnerships with companies (Vera Ciclos and Agencia Masco) enabling substantial support and sponsorships that facilitated the successful distribution of supplies Secured and effectively utilized a €1,000 grant, enabling delivery the program and addressing critical socioeconomic and gender inequalities in project focuses 	
Coordinator <i>Environmental Action Group, United World College Maastricht</i>	Feb 2023 – Apr 2024 Limburg, NL
<ul style="list-style-type: none"> Founded the Sustainable Period Program, raising €250+ to provide 24 menstrual cups to students and 6 to teachers and staff, promoting sustainable practices and menstrual health awareness within the college community Orchestrated the successful launch of UWC's first Barter Shop, a money-less shop following the concept of "trueque" for the members of the community to exchange items and reduce reliance on online retail Oversaw sustainability initiatives as part of the college's Eco-Team, contributing to waste management improvements, energy efficiency, and integrating sustainability into the curriculum, furthering the college's commitment as an accredited Eco-School Supervised and led 2023–2024 projects end-to-end, supervising the logistics, finances, human resources and communication of the group 	
Civic & Social Leadership	
Founder & Director <i>Peru Opportunities Bank (Banco de Oportunidades del Perú)</i>	Apr 2023 – Present Lima, PE
<ul style="list-style-type: none"> Created a comprehensive <u>digital database of opportunities</u> tailored for low-income Peruvian students, identifying a wide range of resources, including academic programs, language-learning opportunities, competitions, jobs, and grants Built a self-sustaining intake method enabling ongoing user submissions and a community of opportunity-seekers, and provided full, free, and constant access to 10,000+ students since its launch 	
CMSPP Model United Nations 2021 Secretary-General <i>High Performance School of Lima (COAR Lima)</i>	Jun 2021 – Dec 2021 Lima, PE
<ul style="list-style-type: none"> Founded and led the executive team of the first Model UN conference from the network of High Performance Schools of Peru, recognized as the best 2021 MUN event in the national circuit; led a delegate body of 345 participants, from 8 different countries Received <u>2021 MUN Impact Award</u> by the United Nations High Commissioner for Refugees (UNHCR) 	

Metropolitan Lima Ambassador	Oct 2021
<i>National Youth Secretariat of Peru (SENAJU) & Ministry of Education of Peru</i>	<i>Lima, PE</i>
<ul style="list-style-type: none"> • Represented Metropolitan Lima in the 2021 Youth Regional Forum for policy drafting and consultation spaces for decentralized participation of youth in politics • Orchestrated the consolidation of local youth demands into the "Vision of the Tricentennial of Peru" Youth Declaration, facilitating high-level dialogues between student leaders and government officials to align regional priorities with the National Strategy for Youth 	
Community Engagement & Service	
Benefit Lunch Group	Feb 2025 – Present
<i>College of the Atlantic</i>	<i>Bar Harbor, ME</i>
<ul style="list-style-type: none"> • Supported execution of fundraising events, generating \$3,500+ to support education for youth in Nepal, India, and Bhutan • Contributed to impactful campaigns for Children of the Himalayas, funding schooling for Himalayan communities via Shree Mangal Dvip Boarding School; Changthang Ladakh, partnering with Lhagsam Trust to advance student education; Camp Rural-Urban Friendship (RUF), to bridge differences between children from rural and urban areas 	
Bicentennial Project	Jul 2023
<i>TECHO Perú</i>	<i>Lima, PE</i>
<ul style="list-style-type: none"> • Contributed to construct 8 emergency homes in the "Los Sauces" community, San Juan de Miraflores, in response to the Yaku cyclone that affected the coastal region of Peru, directly addressing the housing crisis faced by low-income families • Engaged directly with affected families to inform the provision of dignified, community-driven housing solutions while actively addressing their needs as a community 	
Peruvian Association for United Nations Studies	Jan 2021 – Dec 2021
<i>Asociación de Estudios sobre las Naciones Unidas del Perú</i>	<i>Lima, PE</i>
<ul style="list-style-type: none"> • Supported initiatives such as Acción AENU, an educational program promoting psychosocial skills in vulnerable children and youth, recognized by the UN • Organized LATAM Model UN 2021, facilitating debates on global issues for 200+ university students across Latin America 	
Certifications	
MDT Certificaat	May 2024
<i>Dutch Ministry of Education, Culture and Science (Dienst Uitvoering Onderwijs & Ministerie van OCW)</i>	
Wilderness/Remote Location First Aid	May 2023
<i>Wilderness Medical Associates Belgium</i>	
Entrepreneurial Skills Pass	Oct 2021
<i>Junior Achievement Europe & Erasmus+</i>	
Introduction to Cyber Security & Introduction to IoT	Jun 2020
<i>Cisco</i>	