María Cristina Ortega García

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Professional Objective

Use my experience in **Nutrition, pedagogy, and data science** to contribute to the advancement of research and teaching in higher education. I am currently studying a **Master's Degree in Data Science**, with interest in the integration of **artificial intelligence, statistical analysis, and machine learning** applied to public health and education. I seek to collaborate in as a teacher and researcher, providing a transdisciplinary and innovative approach that encourages critical and ethical learning.

Strengths and Competencies

- Experience in transdisciplinary projects with AI, NLP, and data science applied to healthcare.
- Experience in university teaching and at different educational levels (preschool, high school and higher education).
- Scientific production and innovation in public health, nutrition, and data analysis.
- Transdisciplinary approach that links technology, pedagogy and health.
- Commitment to values of equity, professional ethics, and human rights in the use of emerging technologies.

Academic Training

- **Master's Degree in Data Science,** Latin American Technological University Online *(to be completed in 2026)*
- **Bachelor's Degree in Applied Nutrition**, Open and Distance University of Mexico (UnADM), 2015–2020
- **Bachelor's Degree in Pedagogy**, University of Cuautitlán Izcalli (UCI), 2001–2005

Professional Experience

Associate Researcher
Transdisciplinary Research for Augmented Innovation Laboratory (TRAI-L.com), CDMX
2020 – Present

Transdisciplinary research in **Data science, machine learning, NLP, and artificial intelligence applied to public health** Design and development of intelligent assistance prototypes for nutrition and disease prevention. Collaboration on projects with scientific publications.

Published products:
- *Leveraging Machine Learning to Unveil the Critical Role of Geographic Factors in COVID-19 Mortality in Mexico, Computing and Systems*, 2024.
- *Natural Language Processing Approach Using a Neural Network Ensemble (CNN-HSNN) for Skin Cancer and Multi-Disease Classification, Computing and Systems*, 2024.
- *Skin Cancer Diagnosis Enhancement Through NLP and DNN-Based Binary Classification, Springer Nature Switzerland*, 2023.

In progress:
- *DiabAsesorIA: Hybrid LLM–CNN–Hypergraph Ontology Bot for Predicting Glycated Hemoglobin (HbA1c).*
- *CuidaMí: Leveraging Data Science and Artificial Intelligence to Improve Treatment Adherence in Pediatric Disability Care*

- *Impact of Diabetes on Mortality in COVID-19 Hospitalized Patients: A Retrospective Cohort Study in Mexico.*

Prototypes:

- *Nutribot DiabAssesorIA*– Advanced prototype for diabetes prevention using AI in glycosylated hemoglobin classification. 🔗https://trai-l.com/nutribot
- CuidaMí - A comprehensive AI-based solution to support parents of children with disabilities in managing treatments, therapies, and reminders. 🔗https://cuidami.trai-l.com

University Professor
INTER Center for Higher Education, Izcalli Campus (UINTER), CCT. 15PSU2309Q
2022 – Present
Subjects taught:

- Applied Sciences: Food Chemistry, Food Microbiology, Nutrition.
- Pedagogy and social sciences: Pedagogical theory, Educational theories, Communication theories, Educational psychology, Thought and language.
- Research and management: Research techniques, Learning assessment, Educational group management, Quality systems in education, Organizational design, Administrative process, Professional ethics, Organizational communication.

Computer Science and Technology Teacher
José Vasconcelos School A.C., Cuautitlán Izcalli
2016 – 2022

- Teaching courses on computer science and technology applied to education.
- Integration of digital tools in educational processes.

Previous Jobs
- **Supervisor Electoral**, INE, Cuautitlán Izcalli — 2016
- **Public relations**, Antonio González Caballero Theater Company, Cuautitlán FESC-UNAM — 2013–2015
- **Instructor Trainer**, Institute for Comprehensive Care for Burned Children (IAINQ), Mexico City — 2010–2011
- **Computer Science Teacher (preschool-primary level)**Inter-American College, Tultepec, State of Mexico — 1999–2003

Languages
- **Advanced English**
  - TOEIC: 925 (2024)
  - Level 6, FESC-UNAM (2016)

Continuing Education
- Diploma in Specialized Clinical Nutrition (120 hrs), Institute of Postgraduate Studies for Health Professionals S.C., 2022
- Advances in Nutritional Diagnosis and Functional Intervention of Obesity Course (20 hrs), National Institute of Research and Education in Health and Nutrition, 2022
- Course in Molecular Biochemistry (13 hrs), CONOCER A.C., 2022
- Course in Clinical Biochemistry (20 hrs), Professional Training Association for Higher and Postgraduate Levels, 2021

- Diploma in Clinical Nutrition with a Focus on Gastrointestinal Diseases (160 hrs), UTEG, 2021
- Clinical Laboratory Test Interpretation Course-Workshop (32 hrs), Institute of Postgraduate Studies for Health Professionals S.C., 2021
- Ketogenic Diet Course (20 hours), UTEG, 2021
- Functional Nutrition and Dosage of Bioactive Compounds in Chronic Metabolic Disease Course (40 hrs), 2020
- Clinical Nutrition and Metabolism Course (40 hrs), Medical-Surgical Society of the Juárez de México Hospital A.C., 2018
- Breastfeeding and Lactation Course, INSP, 2018
- Workshop on Diets in Clinical Practice and Emerging Diets, Anáhuac University, 2021
- Metabolic Flexibility, Aging, and Nutrigenomics Course, Anáhuac University, 2021
- Vegan/Vegetarian Nutrition Seminar, UAEM, 2021
- Let's Learn About Breastfeeding Course (40 hrs), DIF Mérida, 2021
- 10th Breastfeeding Symposium, INP, 2021
- Enteral Nutrition in Patients with Acute Renal Failure in the ICU, College of Nephrologists of Mexico, 2020
- Theater and Body Expression Workshop, FESC-UNAM, 2013–2015