



PROFILE

- Driven by **improving people's health** through the practical implementation of data-informed solutions using machine learning and artificial intelligence tools.
- Strong **problem-solving** and **critical-thinking capacities**, proven by the successful completion of numerous research studies in diverse areas of medical technology.
- Efficient **interpersonal communication skills** leading to collaborations with members of diverse multidisciplinary backgrounds (e.g., scientists, health professionals, technicians, engineers) across different teams, research groups, and institutions.
- Solid **scientific analytical skills** and **data analysis** abilities as evidenced by the authorship of several peer-reviewed papers and panel-reviewed research presentations.
[L http://www.arturomoncadatorres.com/publications](http://www.arturomoncadatorres.com/publications) 

EXPERIENCE

IKNL  (NL)
2018 – Today

Clinical Data Scientist

Designed, developed, and implemented machine learning- and AI-based frameworks based on data from the Dutch National Cancer Registry (NCR) to predict patient survival, improve treatment, and support decision-making processes in oncology.




Developed and implemented explainable machine learning-based models that serve as decision support for different stakeholders in a patient's care pathway.

Developed and implemented federated learning applications to predict outcomes while preserving patient privacy.

Guided, managed, and supervised master's/PhD students through their theses, while supporting them as part of their early career development.

KU Leuven  (BE)
2014 – 2018

Doctoral Researcher

Designed, developed, and implemented physiologically-based computational models of different auditory processes and implantable hearing prosthesis in normal hearing , hearing impaired , and listeners with cochlear implants .

[L In collaboration with Danmarks Tekniske Universitet \(DK\)](#) 

Guided, managed, and supervised master's students through their theses.

Organized and coordinated scientific meetings, conferences, workshops, and outreach activities for specialized and general audiences.


SinTrafico  (MX)
2012


Mid Data Scientist

Developed a data mining-based framework to collect and analyze real-time traffic data to optimize travelling routes by identifying events and bottlenecks.

ETH Zurich  (CH)
2011, 2013

Research Assistant

Implemented a machine learning-based algorithm for movement classification using wearable sensors' (accelerometer, gyroscope, barometer) data of healthy and stroke participants with an accuracy of >90% .

Designed experiment, collected, and analyzed inertial sensor data to quantify white cane usage to improve travel aids of visually impaired people .

EDUCATION

KU Leuven (BE)
2014 – 2018

Doctoral Degree in Biomedical Sciences

Thesis: Applied Physiological Modelling of Auditory Processes – Speech Intelligibility, Modulation Detection, and Binaural Hearing

Marie Skłodowska-Curie scholarship for Early Stage Researchers

ETH Zürich (CH)
2012 – 2014

Master of Science in Biomedical Engineering (Cum Laude)

Focused on Bioimaging (MRI) and Medical Image Analysis

MSc Thesis: MR Measurements of Dynamic Changes in Aortic Vessel Area and Pulse Wave Velocities Induced by Simulated Obstructive Apnoea

Semester Thesis: Image Interpolation for Reconstruction of 4D MRI Data

└ In collaboration with U. of Basel (CH)

Excellence scholarship for Master's studies


U. Iberoamericana (MX)
2007 – 2011

Bachelor of Science in Biomedical Engineering (Summa Cum Laude)

Major in Instrumentation

Thesis: Activity Classification in Healthy Subjects Using an Enhanced IMU

└ In collaboration with ETH Zürich (CH)

Developed the hardware and signal processing algorithms for a home control system based on electrooculography. National Instruments University Challenge first national prize .

Excellence scholarship for Bachelor's studies

SKILLS



PROGRAMMING + INFORMATICS



Python
MATLAB



R
LaTeX



Git
LabVIEW
C



LANGUAGES



Spanish (native)
English



Dutch (studying)
French



German
Czech
Italian



KNOWLEDGE

Machine learning + AI
Computational modelling
Human anatomy + physiology
Algorithm development
Data processing, analysis, and visualization
Basic (medical) image analysis



SPECIAL ABILITIES

Focused attention to detail
Out-of-the-box thinking
Fast learner
Team leader + team player
Interdisciplinary communication
Driven to action



EXTRACURRICULAR ACTIVITIES

Community manager
Engaged with and generated content for social media audience.
└ ExpORL, ETH BEEZ
Student society delegate
Represented students at university academic councils; organized events.
└ ETH Zurich, U. Iberoamericana



HOBBIES

Mid-distance running
Volleyball
└ Indoor, beach
Dancing
└ Latin, swing, ballroom
LEGO building (especially robotics)
Pop data science projects

References are available upon request