



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 reduce the impact of cancer on patients.




Developed and implemented explainable machine learning-based models that serve as support in decision-making processes 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