ARTURO MONCADA-TORRES
Biomedical Data Scientist

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👤 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.
  └ 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 🔗.
└ 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.

ETH Zurich 🔗 **(CH)**
2011, 2013

Research Assistant
Implemented a machine learning-based algorithm for classification of activities of daily life using **wearable sensors' (accelerometer, gyroscope, barometer)** data of healthy 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. Ibero (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	R	Git
MATLAB	LaTeX	LabVIEW
		C

💬 Languages

●●●●●	●●●○○	●○○○○
Spanish (native)	Dutch (studying)	German
English	French	Czech
		Italian

📖 KNOWLEDGE + SPECIAL ABILITIES

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

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

♟ HOBBIES

Rollerblading
LEGO building (including robotics)
Volleyball (indoor)
Gaming
Pop data science projects

References are available upon request