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 scientific research studies in diverse areas of healthcare and medical technology.
- Efficient **interpersonal communication skills** leading to cross-functional collaborations with stakeholders of diverse multidisciplinary backgrounds (e.g., scientists, health professionals, policy makers, 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

Kite Pharma (NL)
2023 – Today

Senior (Associate) Data Scientist

Designed, developed, and deployed explainable machine learning- and AI-based models to support decision-making in the manufacturing process of immunotherapy in a GMP environment.

IKNL (NL)
2018 – 2023

Clinical Data Scientist

Designed, developed, and implemented explainable machine learning- and AI-based pipelines based on **observational data** from the Dutch National Cancer Registry to predict survival, improve treatment, and support in decision-making processes for different stakeholders in a patient's care pathway.

Developed and implemented federated learning applications to predict patient outcomes while preserving data 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 physiological acoustic neurological models of speech understanding, modulation detection, and binaural hearing.
- In collaboration with Danmarks Tekniske Universitet (DK)

Collected and analyzed behavioral data of normal hearing, hearing impaired, and listeners with cochlear implants for validating the aforementioned models.

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

ETH Zurich (CH)
2011 – 2013

Research Assistant

Implemented a machine learning-based algorithm for classification of activities of daily life using **wearable sensors'** 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 Computational Auditory Neurology

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 Wearable Technology and MRI 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 | NumPy | Keras | Seaborn | R | Git | LabVIEW
scikit-learn | pandas | Jupyter | MATLAB | LaTeX | SQL
MLOps | MLFlow

Languages

Spanish (native)
English
●●●●●

Dutch (studying)
French
●●●○○

German
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)
Pop and biomedical data science projects
Gaming

References are available upon request