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 (ML) and artificial intelligence (AI) 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

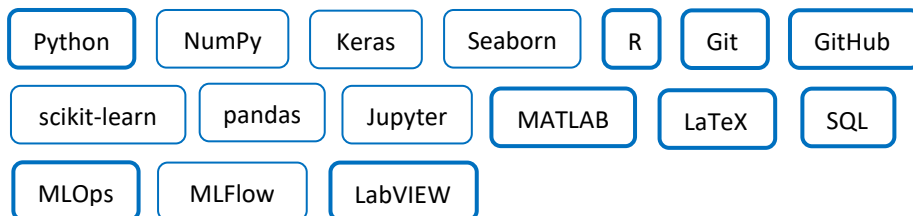|	
Kite 🔗 (NL) 2022 – Today	*Senior (Associate) Data Scientist* **Designed and implemented (semi-)automatic pipelines** for the quality control and monitoring of the manufacturing process of immunotherapy for cancer patients. **Performed *ad hoc* investigations** using statistical and ML tools to better understand the effects of different parameters in the quality of the final product and improve it. **Established a framework for data science and analytics** compliant with good manufacturing practice (GMP) that serves the needs of different areas within the company.
IKNL 🔗 (NL) 2018 – 2022	*Clinical Data Scientist* **Designed, developed, and implemented machine learning- and AI-based pipelines** based on **observational data** from the Dutch National Cancer Registry to predict survival, improve treatment, and reduce the impact of cancer on patients 🔗. **Developed and implemented explainable ML-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 patient outcomes while preserving data privacy 🔗. **Guided, managed, and supervised** master's/PhD students through their theses.
KU Leuven 🔗 (BE) DTU 🔗 (DK) 2014 – 2018	*Doctoral Researcher* **Designed, developed, and implemented physiological neural models** of speech understanding 🔗, modulation detection 🔗, and binaural hearing 🔗. **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 pipeline** 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 Data Neuroscience
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	GitHub
scikit-learn	pandas	Jupyter	MATLAB	LaTeX	SQL
MLOps	MLFlow	LabVIEW

💬 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