

IÑIGO DE LA MAZA

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EDUCATION

Massachusetts Institute of Technology (MIT)

Feb. 2019 - Present

Visiting student

Cambridge, MA

- Master's Thesis at IMES: *"Tailoring Systems Pharmacology through Computational Models"*
- MIT 15.095 - *Machine Learning Under a Modern Optimization Lens* (auditing) (Prof. Dimitris Bertsimas)
 - Convex, robust, and mixed integer optimization in machine learning
 - Course final project on predicting children's performance in educational game apps
- MIT 2.98 - *Sports Technology: Engineering & Innovation* (Prof. Anette (Peko) Hosoi & Christina Chase)
 - Participated in a data science project for an international sport industry organization in team of seven
 - Held roles as team leader and event classification model developer

EAE Business School

Sept. 2018 - May 2020

Candidate for Online MBA

Barcelona, Spain

- Master's Thesis on the economics of data, and its influence on corporate success and value creation
- Relevant coursework: Operations Logistics, Control Management, Managerial Skills, Accounting, Cost Management

Technical University of Catalonia (UPC)

Sept. 2017 - May 2020

Candidate for MS in Industrial Engineering; minor in Biomedical Engineering

Barcelona, Spain

- GPA: 3.60 | 3 courses with honors
- Relevant coursework: Industrial Scheduling, Transport Networks, Business Management, Modelling and Simulation of Biomedical Systems, Technological Innovation, Process Control

Technical University of Darmstadt

Mar. 2017 - Aug. 2017

Visiting Student

Darmstadt, Germany

- Bachelor's Thesis at PTW: *"Potential analysis and pre-design of an additive manufactured floating bearing bushing for motor spindle drives"*

Public University of Navarre (UPNA)

Sept. 2013 - Aug. 2017

BS in Industrial Engineering; minor in Mechanical Engineering

Pamplona, Spain

- GPA: 3.45 | 4 courses with honors
- Relevant coursework: Statistics, Control Theory, Numerical Methods, Advanced Physics, Lineal Algebra, Calculus, Project Management, Electrical Technology

RESEARCH EXPERIENCE

MIT Clinical Research Center

Feb. 2019 - Present

Research Affiliate

Cambridge, MA

- Under the supervision of Prof. Elazer Edelman and Dr. Kumaran Kolandaivelu
- Used systems biology mathematical modeling, data science, computational statistics, ML, and precision medicine approaches in cardiovascular-related biomedical projects
- Developed a mathematical model of blood coagulation under flow conditions
- Designed, manufactured, and tested microfluidic devices for blood clotting experiments

Research Center for Biomedical Engineering (CREB) @ UPC

Feb. 2018 - Feb. 2019

Research Intern

Barcelona, Spain

- Led biomechanics research project with industry partners (NISSAN, Meleghy Automotive) about the use of industrial exoskeletons in car manufacturing assembly lines (press coverage: [1,2,3](#))
- Proved that the use of exoskeletons in the automotive sector can reduce the muscular effort of workers by up to 60%, directly impacting local regulatory policies
- Held roles in project management, experiment design, in-situ data collection, data pipeline implementation, and experimental outcomes analysis

RELEVANT PROJECTS/COURSES

Data Science projects	2019 Data Science Bowl Kaggle <ul style="list-style-type: none">· Prediction of children performance in educational game apps· Used Optimal Classification Trees (OCT & OCT-H) and mixed integer optimization· Designed feature engineering pipeline and optimization models
Certifications (MOOCs)	Data Science Professional Certificate IBM (9 courses) <ul style="list-style-type: none">· Databases and SQL, Python for data analysis, data visualization, and AI Machine Learning Stanford University <ul style="list-style-type: none">· Neural Networks, dimensionality reduction, anomaly detection, recommender syst. Business and Financial Modeling Specialization Wharton, UPenn (5 courses) <ul style="list-style-type: none">· Quantitative modeling, modeling risk and realities, model-based decision making ML & Reinforcement Learning in Finance NYU Tandon (4 courses) <i>(ongoing)</i> <ul style="list-style-type: none">· Algorithmic trading, Markov Decision Process models, Cryptocurrencies Data Analytics in Finance U. of Illinois at Urbana-Champaign <i>(ongoing)</i>
Competitions	2019 Harvard/MIT Business Case Competition <ul style="list-style-type: none">· Created a strategic business plan for a real client (bioprinting firm) over two weeks· Held roles in 3D bioprinting market data analysis, projected market sizing, and business model definition 2019 MIT Hacking Medicine 2nd Place <ul style="list-style-type: none">· Developed a low-cost device for applying Negative Wound Pressure Therapy and focused on making it accessible for developing countries

PUBLICATIONS

Conference proceedings	Biomechanical evaluation of upper limb exoskeletons in automotive assembly using EMG <i>IX Meeting of the Spanish Chapter of the European Society of Biomechanics, 2019</i> With M. Claramunt-Molet, B. Domingo-Mateu, J. Danús-Jaume, V. Enriquez-Carrera, A. Ugartemendia-Etxarri, O. Muñoz-Fenández, S. Domingo, F. Miralles, J.M. Font-Llagunes, and S. Idelsohn-Zielonka (link , pp.25-26)
In progress	Constraint diagnostics through high-dimensional models With K. Kolandaivelu and E.R. Edelman

LEADERSHIP EXPERIENCE

MIT Rugby <i>Executive Committee Member</i>	Aug. 2019 - Present <i>Cambridge, MA</i>
<ul style="list-style-type: none">· Organized recruitment, budget control, and club's events scheduling	
NGO Kutembea Na Tanzania <i>International Volunteer</i>	Aug. 2018 - Sept. 2018 <i>Arusha, Tanzania</i>
<ul style="list-style-type: none">· Led an intercultural team of five to build a school for local children· Designed a renewable energy-based electrical system for the school	
Cardenal Larraona High School <i>Volunteer Teacher</i>	Oct. 2013 - Jun. 2015 <i>Pamplona, Spain</i>
<ul style="list-style-type: none">· Taught mathematics and physics to children with low academic performance	

SKILLS

IT	Python (Pandas, Keras, Sci-Kit,...), Julia (DifferentialEqs, JuMP, Gurobi), SQL , TensorFlow , Google Cloud Suite , Tableau , MatLab , LaTeX
Languages	Spanish (Native), English (Fluent), German (Advanced), French (Medium)