Mireia
Yurrita Semperena

DATE OF BIRTH:
03/08/1996

CONTACT

Nationality: Spanish

Gender: Female

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ABOUT ME

I consider myself a very enthusiastic and dynamic person, who enjoys learning. The desire to create technologies with a positive social impact is what motivates me to keep training as an engineer.

EDUCATION AND TRAINING

24/09/2018 – 14/12/2020 – San Sebastian , Spain

Master of Engineering, MEng, Industrial Engineering

University of Navarra

- Master's Thesis at the Massachusetts Institute of Technology: "Dynamic Urban Planning: pro-social incentive implementation using ABM". Score: 10/10

Final grade: 9.28/10

01/09/2014 – 17/09/2018 – San Sebastian, Spain

Bachelor of Engineering, BEng, Industrial Technology Engineering

University of Navarra

- Second highest score of the class
- Candidate for the Academic Excellence Award
- Bachelor's Thesis: "Development of a mathematical model of beam-engine contact in lifts and study of the application of magneto-sensitive rubber for vibration isolation". Score: 10/10

Final grade: 9.16/10

PUBLICATIONS

Dynamic Urban Planning: an Agent-Based Model Coupling Mobility Mode and Housing Choice. Use case Kendall Square.

In: Advances in Intelligent Systems and Computing (accepted, 2021)

Other Authors: Grignard, A., Alonso, L., Zhang, Y., Jara-Figueroa, C., Elkatsha, M., Larson, K.

WORK EXPERIENCE

01/09/2020 – CURRENT – Beasain, Spain

Hydraulic Design Engineer

INDAR, Ingeteam Group

Main tasks include:

- 3D hydrodynamic design of radial, axial and semi-axial turbomachinery.
- Blade loading (pressure distribution) and flow behavior control applying Computational Fluid Dynamics (CFD)
- Automatic multi-point / multi-objective optimization implementation using AI.

28/10/2019 – 31/07/2020 – Cambridge, United States

Visiting Student

Media Lab, Massachusetts Institute of Technology

- Development of a dynamic incentive system to promote pro-social development in cities.

- Application of Agent Based Modeling (GAMA platform, UMMISCO, IRD) and Machine Learning techniques (Python) to predict housing and mobility patterns.
- Exploration of policies that lead to more vibrant and diverse communities.
- This project was part of the CityScope line of work in the City Science group.

https://www.media.mit.edu/people/myurrita/overview/

02/07/2018 – 24/09/2018 – Hernani, Spain

Summer Intern in the Mechanical Engineering Department

IDEO Orona

- Vibration isolator calculation tool improvement in Matlab

09/01/2018 – 29/06/2018 – San Sebastian, Spain

Intern in the Mechanical Engineering Department

CEIT Research Centre

- Development of my Bachelor's Thesis in liaison with the Mechanical Engineering team at IDEO Orona.
- Original title: "Desarrollo de un modelo matemático del contacto motor-armadura en ascensores y estudio de la aplicación de elastómeros magneto-sensibles para el aislamiento de vibraciones"

01/06/2017 – 04/08/2017 – Hernani, Spain

Summer Intern in the Mechanical Development Department

IDEO Orona

- Creation of a Matlab GUI to optimize the direction of lift cars based on the Strength of Materials elastic equation.
- Design of a mock-up using SolidWorks for testing load weighing sensors.

01/06/2016 – 29/07/2016 – San Sebastian, Spain

Summer Intern in the Fluid Mechanics team

Tecnun - University of Navarra

- Study of the parametric model of turbine blades using Matlab
- Deepening of Computational Fluid Dynamics (CFD) Methods.

01/06/2015 – 31/07/2015 – San Sebastian, Spain

Summer Intern in the Strength of Materials team

Tecnun - University of Navarra

- Matlab software design for the calculation of deformation, shear stress and bending moment in beams using the Method of Finite Differences.

TEACHING EXPERIENCE

01/09/2015 – 08/09/2017

Basic Mathematics Course Collaborator at Tecnun, University of Navarra

Collaboration helping first year engineering students refresh basic mathematical concepts through practical sessions. This Course is held every year during the first week of September. I was a collaborator in three consecutive years.

HONOURS AND AWARDS

2019
International Connecting Talent Fellowship – Fomento de San Sebastián

2019
Global Internship Program 2019 Fellowship – Caja Rural de Navarra

2018
Universidad de Navarra - Grupo Santander Fellowship – Banco Santander

DIGITAL SKILLS

Programming

Matlab / GAML (Java based) / Python / C++ / Labview / Git
Others

Microsoft Office / Tableau / modeFrontier / SolidWorks / PTC Creo / Axcent/Pumpal (CAE) / GIS / ANSYS

LANGUAGE SKILLS

MOTHER TONGUE(S): Basque / Spanish

OTHER LANGUAGE(S):

English

Listening	Reading	Spoken production	Spoken interaction	Writing
C2	C2	C1	C1	C1

French

Listening	Reading	Spoken production	Spoken interaction	Writing
C2	C2	C1	C1	B2

German

Listening	Reading	Spoken production	Spoken interaction	Writing
B2	B2	B2	B1	B1

LANGUAGE CERTIFICATES

13/10/2018 – CURRENT

IELTS Academic Module 8.0

13/11/2014 – CURRENT

DALF C1 (Diplôme approfondi de langue française)

10/09/2019 – CURRENT

Goethe-Zertifikat B2