

# Ricardo Faúndez-Carrasco

AI - machine learning researcher

## date of birth

May - 24 - 1992

## contact

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LinkedIn profile

## languages

**ESP** mother tongue

**ENG** fluent (C1)

**JPN** basic (N5)

## programming

Python

Java

C/C++

R

Matlab & Simulink

Bash

CSS3 & HTML5

L<sup>A</sup>T<sub>E</sub>X

## skills

Responsability

Teamwork

Communication

Fast learner

Mathematical skills

Computer Vision

Speech Processing

HPC

Kalman filters

State-Space models

## Summary

I am a physicist profoundly interested in Artificial Intelligence. Experience hands-on in Deep Learning in time series analysis both in speech treatment and medical data. Preferably interested in research positions.

## education

2015–2017 **M.Sc.** in Automation and Robotics Universidad Politécnica de Madrid  
*Deep Learning strategies for the enhancement of Automatic Speech Recognition architectures*

This thesis explored different state-of-the-art techniques such as LSTM cells, word2vec embeddings and convolutional layers and their effect on an HMM-DNN ASR system. Graded 10/10, candidate to Honors.

2016–2018 **M.Sc.** in Computational and Mathematical Engineering Universitat Rovira i Virgili & Universitat Oberta de Catalunya  
*Prediction of Breast Cancer survival rates*  
Thesis reporting on data mining and machine learning algorithms predicting the evolution of both survival rates and treatments' effectiveness on breast cancer patients. Pending to be published in *International Journal of Medical Informatics*.

2010–2015 **Bachelor** in Physics Universidad Autónoma de Madrid  
*Isotropic-Nematic-Liquid crystal phase transition: a lattice model*  
This thesis reported on Monte-Carlo simulations of liquid crystal's lattices undergoing phase transitions due to temperature or shape modifications. Graded 8.8/10.

## experience

2017–Now **National Institute of Informatics - NII** Tokyo, Japan  
*Research Intern*  
Working on multi-model models trained and designed in a fashion so they can perform at the same time traditionally unrelated tasks, such as Speech Enhancement, Voice Conversion and Text-to-Speech Synthesis. Pending of publishing our latest results in *INTERSPEECH*.

2017 **Escuela Técnica Superior de Ingenieros de Telecomunicación - UPM** Madrid, Spain  
*Research Assistant*  
Focused Automatic Speech Recognition, doing research on different approaches based on Deep Learning to improve the accuracy of the whole system, at both acoustic and language level.

2015-2016 **Medicsen** London, United Kingdom  
*Research & Development*  
Development of the first fully functional and automatic pancreas for diabetic patients. In charge of building the algorithms and mathematical models of the disease from scratch. Main achievements:

- Glycemic curve predicted with **85%** accuracy on the 2-hours-ahead glycemic level from inputs on meal intake, insulin dose and exercise.
- **Patent:** MedicSen, 2016. Non-Invasive Artificial Pancreas, U.S. Application 50389, MED-001PR, filed January 2016.
- Co-speaker with Eduardo Jorgensen (MIT Innovator 2017) in REWORK Deep Learning in Healthcare Summit in London, April 2016.

2015	<b>La Paz Hospital</b> <i>Intern</i> Worked within the Radio-therapy and Nuclear Medicine Departments. Dealt with cancer treatments using Monte-Carlo simulations and denoising of medical images.	Madrid, Spain
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## volunteering

2017	<b>Collaborator in AILoveU</b> Speaker at the Bussiness Institute (IE) in AILoveU Vol.2: "Siri's hearing aid" on the limitations of current Deep Learning technologies and its potential.	Madrid
2014	<b>Collaborator in ESN-UAM</b> In charge of cultural city tours around the city of Madrid.	Erasmus Students Network
2012	<b>Board Member in AEGEE-Madrid</b> Treasurer, Summer University organiser of this student organisation, based on student exchanges and non-formal training.	European Students Forum, Brussels
2012	<b>Board Member of Séptimo Arte UAM</b> Co-founder and Vice-president of this cinema forum student association.	Universidad Autónoma de Madrid

## interests

**professional:** data science, neuroscience, quantum computing. **personal:** karate (1st Dan), meditation, basketball, travelling, beer tasting (awarded in a Prague brewery).