



# Adrián Arnaiz Rodríguez

Computer and Data Science - AI Research

23/01/1997

Web page

Address

España,  
Burgos,  
Legión Española  
Street, 8, 9B,  
09001

Phone

+34 659 540 233

Mail

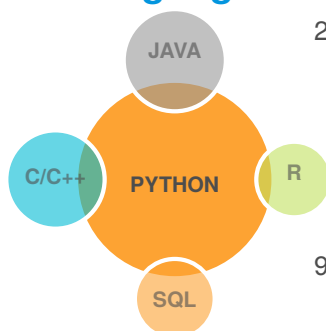
arnaiztech@  
gmail.com

adrianar@  
ubu.es

Languages

Spanish  
English (C1 - 176  
Cambridge  
LinguakSkill)

Programming  
Languages



## Work Experience

2/20 - Ongoing **Research staff**

[University of Burgos](#)

Researching about Data Mining with the Computer Science Department, specifically with *ADMIRABLE* and *DATAHES* research groups .

- European project Self-Regulated Learning: SmartArt.
- Plugin for Unreal to extract and analyze VR data in Real Time
- Platform *UBUMLaas*. University Web Page that allows to run ML experiments as a service with classical and custom algorithms like Random Balance or Rotation Forest.

3/21

**Open Source Contributor @ Lightly**

[Lightly AI python library](#)

Contributor of the Python Pytorch-based library Lightly [*Github* | *Python Doc*] which contains the cutting-edge methods of Self-Supervised Learning. Main contributor of *Lightly version 1.1.2* implementing the *Barlow Twins Algorithm from FacebookAI*. Congratulated by great researchers such as *Jerome Pesenti* (Head of AI @ FacebookAI).

1/20 - Ongoing

**Parkinson's Disease Detection and Monitoring through voice.**

[Research](#)

Data mining techniques (ML and DL) applied to use of biomarkers extracted from the voice for the detection of Parkinson. Link: *Official page with explanation, Notebooks and links to media press.*

09/19 - 12/19

**Intelligent Automation & RPA Consultant**

[Ernst & Young](#)

3 projects using RPA and ML:(1) Chatbot for managing Blue Prism processes through voice [internal project]. (2) Unbalanced Email Classification using DL [Telefónica]. (3) Payment tax process made with RPA with Fuzzy Name Matching problem inner [Xunta de Galicia - Public Sector].

12/18 - 07/19

**Research fellow at UBU**

[University of Burgos](#)

Research assistant scholarship in the Civil Engineering department of the University of Burgos, research group *ADMIRABLE*. Working with collaboration grant. Research in the project *Use of biomarkers extracted from the voice for the detection of Parkinson*, which is my final degree project (BSc Thesis), evaluated with honors.

## Education

2/20 - 01/20

**MSc Data Science**

[Universitat Oberta de Catalunya](#)

GPA: 9,75 out of 10. Thesis: 9.6.

Higlited Subjects: Advanced Statistics, Advanced models of Data Mining, Reinforcement Learning, Data Visualization and Network Science. **Mater's Thesis in collaboration with University Colleague of London (Dr. Baris Kanber):** *Deep Convolutional Autoencoder for denoise T1 brain MRI* (9.6/10). 8 out of 10 subjects graded with honors.

9/15 - 7/19

**BSc Computer Science**

[Burgos University](#)

GPA: 8,9/10. Thesis: 9,8/10. **Extraordinary Award of Degree in Computer Engineering (Government Council of the University of Burgos).** 11 subjects graded with honors.

## Technical Skills

- Machine Learning with Python (Deep understand of methods) and DL. 02/20
- Knowledge of ML Python libraries (Sklearn, Keras, Pytorch) and common Math and DataViz libraries (NumPy, SciPy, Pandas, matplotlib, ggplot...) 07/20
- Statistical Analysis with R and Python.
- Algorithmics.
- Knowledge of Data typology and data life-cycle. 09/20
- Concepts of Network Science and network modeling.
- Data Visualization with Tableau, Python, R and Gephi. 06/20
- ETL with pentaho. 06/20
- Analytic Databases and OLAP with Microsoft VS.
- Theoretical design of Analytic Databases (also operational DB). 07/20
- All this skills leads to a good Knowledge Discovery performance. 06/20
- Solve analytical problems building ML models using quantitative, statistical and ML approaches.

## Publications

- Unveiling the informal structure of an academic field in Spain: a Network Analysis** VI COMSOTEC Workshop 2020  
Conference Paper
- Network analysis of co-participation in thesis examination committees in an academic field in Spain** XIV International Conference on Industrial Engineering and Industrial Management - CIO  
Conference Paper

## Courses

- Summer School on Machine Learning and Big Data with Quantum Computing** Porto University and IBM
- Advanced Deep Learning with Keras Course** Data Camp
- Deep Learning in Python Track** Data Camp  
4 Courses: Concepts of DL, intro to Tensorflow, intro to Pytorch and advanced Keras.
- Biomedical Image Analysis Course** Data Camp
- Image Processing with Python Track** Data Camp  
3 Courses: Image Processing in Python, Biomedical Image Processing, Image Processing with Keras.

## Awards

- Extraordinary Award of Degree in Computer Engineering** Government Council of the University of Burgos  
Award for the best student qualification record of the Computer Engineering Degree from the University of Burgos, academic year 18/19.
- Prototype Award** OTRI (Information Transfer Office of Burgos University)  
Project awarded: Use of bio-markers extracted from the voice for the detection of Parkinson. Financial aid and one year of advice for the project.
- Undergraduate Fellowship for Research Collaboration** Spanish Government  
Fellowship from Spanish Government to carry out research tasks. Research in the project *Use of biomarkers extracted from the voice for the detection of Parkinson*, which is my BSc thesis, evaluated with honors

## Professional Interests

Mainly, keep improving my **Data Science and Artificial Intelligence** skills.

Data Science Profile, dominating statistical and mathematical concepts, storytelling, problem understanding and solving, Artificial Intelligence concepts, leading skills and team-work.

## Other personal info

Playing federate soccer since I was 7, playing at Burgos Promesas 2000 until I was 22. Demonstrated leadership and good skills to work in a collaborative environment.

I would like to work in teams with maximum excellence for learning and continuous improvement.

## LinkedIn

More information: LinkedIn

## Github

More information: Github

## Entrepreneur and communication contests

- |         |                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 01/2017 | <b>3rd place in Spin-Up CyL Contest</b><br>3rd place obtained at Innovation Contest SpinUp CyL, realized by Junior Achievement Foundation Spain. Project:<br><a href="http://www.diariodevalladolid.es/noticias/innovadores/poli-detecta-drogas-volante_81864.html">http://www.diariodevalladolid.es/noticias/innovadores/poli-detecta-drogas-volante_81864.html</a>                                    | <a href="#">Spin Up - Junior Achievement</a> |
| 03/2017 | <b>Participation final stage II Premios Semilla Empresarial</b><br>Participation in final stage of II Premios Semilla Empresarial Castilla y León (Valladolid). Project:<br><a href="http://www.diariodevalladolid.es/noticias/innovadores/boligrafo-digital-pasa-limpio-apuntes_90273.html">http://www.diariodevalladolid.es/noticias/innovadores/boligrafo-digital-pasa-limpio-apuntes_90273.html</a> | <a href="#">Premios Semilla CyL</a>          |
| 2017    | <b>Participation courses at Burgos University</b><br>· "Creativity for entrepreneurs" (02/21/2017)<br>· "Learn to undertake: Crowdfunding" (03/14/2017)<br>· "Communication in public" (03/27/2017)                                                                                                                                                                                                     | <a href="#">University of Burgos</a>         |

## Motivation and me at a glance

Graduated (07/2019) in Computer Science and recently (01/2021) got my Master's in Data Science. Strong motivation to pursue a PhD.

- Bsc Thesis made with a collaboration scholarship oriented to a research project in the Civil Engineering department of the University of Burgos. The project is about the **Use of bio-markers extracted from the voice for the detection of neurodegenerative diseases**, a topic related to natural language processing (NLP), signal processing and ML Classification. The project includes concepts of **data mining, machine learning and transfer learning** for the realization of the predictive model of Parkinson's disease. Project in continuous development. A near future objective will be that the results of the research are reflected in a **paper**

Winning project of a **Prototype Award** from OTRI.

- I have just finished my Master's in Data Science with Honors. **Master's Thesis** has been made at University Oberta of Catalunya in collaboration with Dr. Baris Kanber from University College of London. We have developed a Denoiser Deep Convolutional Autoencoder for T1 weighted brain MRI. At this moment, we want to publish, as a review paper, the wide state of the art review that I made in the thesis.

15th February, 2021

Adrián Arnaiz Rodríguez