

Joaquín Gómez Sánchez

M.Sc. Data Engineering & Analytics student at TUM

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Summary

I am passionate about Machine Learning, especially its applications to other areas and the theoretical part. I have hands-on experience from academia and 2 years of internship in Web Development. As a computer scientist with a theoretical background specialised in new methods, I am eager to learn about problems and develop solutions.

Skills

Programming Languages:

- Python
- C/C++
- HTML/CSS
- JavaScript
- R
- SQL

Technologies:

- PyTorch (Lightning)
- Scikit-learn
- OpenMP
- OpenCV
- WordPress

Tools:

- Git
- LaTeX
- Atom
- MATLAB

Languages

Spanish	● ● ● ● ●	Native
Catalan	● ● ● ● ●	Native
English	● ● ● ● ●	C1
German	● ● ● ● ●	B1.1
Japanese	● ● ● ● ●	A1

Awards

- 🏆 1st Prize at 6th City of Esplugues Forum of Excellence for the best High School Research papers

Education

M.Sc. Data Engineering and Analytics

Technical University of Munich

📅 04/2021 - Present

- Master's Seminar in Deep Learning for Medical Applications
- Courses in Parallel Programming, Protein Prediction, Deep Learning, Data Engineering, Natural Language Processing, Visual Data Analytics,

B.Sc. Informatics Engineering (Major in Computer Science)

Polytechnic University of Catalonia

📅 09/2016 - 01/2021

- Elective courses in AI, Distributed Intelligent Systems, ML, CV, Data Mining, Operations Research, Massive Information Search and Analysis and Robotics
- Final degree thesis in Natural Language Processing: "[Analysis and Comparison of Text Similarity Measures](#)" (9.1/10)
- Students representative in 4 courses

Technological Baccalaureate

Institut Severo Ochoa

📅 09/2014 - 06/2016

- Member during 4 years of the School's Theatre Company.
- Maximum grade and city prize for the final High School Diploma research project (required project for the university entrance process in Catalonia region).

Work Experience

Web Developer & System Administrator Internship

UPC Technology Center

📅 02/2019 - 02/2021

📍 Barcelona, Spain

🕒 Part-time

- Maintenance of main websites of CIT UPC, CARNET Barcelona and SEAT's Chair (both projects depend on CIT).
- Creation of micro websites for different events, events registrations and projects submitting.
- Helping on newsletters published by the company.
- Maintenance of company's servers and equipments, and help providing on taking tech decisions and finding solutions.
- Main used technologies: HTML, CSS, JS, PHP, MySQL and WordPress.

Staff

The Eat Out Group

📅 06/2017 - 03/2019

📍 Barcelona, Spain

🕒 Part-time

- Barista/Waiter on different company's places inside Camp Nou (Barcelona)

Instructor of science and math subjects

Institut Severo Ochoa / Self-employed

📅 09/2014 - 06/2017

📍 Esplugues de Llobregat, Spain

🕒 Part-time

- Support instructor for science and math subjects for high school students at home and in the school. Individually and in groups of 4-3 students.

Publications

- Gómez, J., & Vázquez, P. (2022) "Document similarity metrics, an empirical evaluation". IEEE Access. *Under review*.
- Gómez Sánchez, Joaquin (2021) "Analysis and comparison of text similarity measures". B.Sc. thesis, Universitat Politècnica de Catalunya.

Projects

Seminar - Deep Learning for Medical Applications

Chair for Computer Aided Medical Procedures (CAMP) at Technical University of Munich

📍 Munich, Germany

📅 10/2021 - 01/2022

- I wrote a survey and carried out a presentation about the paper "Exploring Simple Siamese Representation Learning".

📄 [Survey](#)

Bachelor's Thesis - Analysis and comparison of text similarity measures

Polytechnic University of Catalonia

📍 Barcelona, Spain

📅 09/2020 - 01/2021

- Analysis and comparison of different similarity measures (Cosine Similarity, Soft-Cosine Similarity, Word Mover's Distance, Relaxed Word Mover's Distance and Normalized Relative Compression) combined with word and text embeddings (word2vec, fastText, GloVe, doc2vec, BERT and ELMo).
- Analysis carried out as empirical evaluation of the performance of the methods on large texts (papers and PhD theses) for two different experiments.
- Technology stack: Python, Gensim, NLTK, SciPy, Scikit-learn, TensorFlow, Jupyter and others.

🔗 [Project on GitHub](#)

📄 [Thesis](#)

Applied Engineering Project - QUESTIONNAIRE4U

Polytechnic University of Catalonia

📍 Barcelona, Spain

📅 02/2020 - 07/2020

- Web platform for the creation/edition of polls, module for answering polls, module for basic statistic and data exploration.
- Project developed in collaboration with a menstrual cups seller with development projects in countries of Africa.
- I developed entirely a module to save images of paper polls in a relational database using CV techniques and OCR.
- Technology stack: Vue.js, HTML5, CSS4, JavaScript, Node.js, MySQL, OpenCV 4 and Google Cloud Platform.

🔗 [Project on GitHub](#)

Final Project of ML course - Pulsars

Polytechnic University of Catalonia

📍 Barcelona, Spain

📅 09/2019 - 01/2020

- Analysis of different machine learning algorithm for the detection of Pulsars (a type of star) using the HTRU2 dataset.
- Technology stack: Python, Scikit-learn, Jupyter.

🔗 [Project on GitHub](#)