PhD student · Computer Scientis

Girona, Spain

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"The best way to predict the future is to create it."

Profile

Graduated Computer Scientist with four years of experience providing innovative solutions in Machine Learning, Data Engineering, and Software Development. My passion for teaching has also led me to conduct research at the University of Girona.

I am fluent in English, Spanish, and Catalan, and also I am highly skilled in a wide range of programming languages and tools.

In my free time, I enjoy sharing insights on my blog about personal projects and geek knowledge, while staying active through volleyball and dancing.

Education

University of Girona

Girona, Spain

PhD Student in Logic and Artificial Intelligence

Gen. 2025 - now

 Adaptation and improvement of SAT solvers for solving combinatorial problems. Focusing on adapting generic SAT algorithms to specific problems in planning, scheduling, and resource allocation.

University of Girona MSc. in Data Science

Girona, Spain

Sep. 2023

• Advanced studies focused on statistical analysis, machine learning methods, and data-driven insights.

University of Girona

Girona, Spain

BEng. in Computer Science

Jun. 2022

• Achieved excellence in the final degree project by creating an open-source video game.

Experience

LAI Research Group

Girona, Spain

• Update and maintenance of the SAT-IT tool for the study of SAT algorithms.

Feb. 2025 - now

- $\,$ Implementation of encoding and factorization processes for planning problems.

Advanced Technician at Reasoning and Learning project (PID2021-1222740B-100)

· Scala | TS | C++ | SAT algorithms | Encodings | PDDL

University of Girona

Girona, Spain

Adjunt Professor, IMAE Department

Sep. 2024 - now

- Led lab sessions and problem-solving sessions for the subjects: *Informàtica*, *Metodologia i Tecnologia de la Programació* and *Programació Declarativa and Aplicacions*.
- I created, expanded and corrected deliverable projects and tests. I also provided support and assistance to students.
- Scala | C++ | Python | LTEX

Adjunt Professor, IMAE Department

Gen. 2023 - Jun. 2023

- Led lab sessions and problem-solving sessions for the subject: Paradigmes de la Programació.
- I created, expanded and corrected deliverable projects and tests. I also provided support and assistance to students.
- · Haskell | Prolog | ŁTFX

Citibeats

Barcelona, Spain **Data Scientist** Sep. 2023 - Mar. 2024

 Developed and deployed topic modeling pipelines with LLMs like BERT improving topic relevance recomendations.

- · Worked on anomaly detection and forecasting projects using statistical methods and deep learning architectures such as RNNs and LSTM.
- · Provided technical support for legacy projects, enhancing model performance through improved metrics and bug fixes.
- · Increased the explainability of legacy models by utilizing clustering techniques and model-based feature extraction.
- Developed private Python libraries and web-hook services, deploying models in private repositories.
- Conducted rapid experiments, thoroughly documenting processes for reproducibility.
- · Python | PyTorch | Sklearn | Hugging Face | FastAPI | Docker | AWS | Google Colab | Git | MLflow

Accenture SL Girona, Spain Dec. 2022 - Aug. 2023

Computer Vision Research

- Developed and open-sourced a CAD platform using CNNs for melanoma detection image based.
- Python | PyTorch | Sklearn | Pandas | Albumentations | Docker | Svelte | Git | Markdown

Nexus Geographics Girona, Spain **Data Engineer** Sep. 2021 - Sep. 2022

- · Contributed to the development of a concurrent framework for data capture, increasing efficiency by 200%.
- Created and maintained API micro-services, ensuring data consistency across multiple SQL and NoSQL databases.
- Designed and developed interactive web applications to visualize on-demand and streaming data.
- Trained new team members on key technologies, reducing onboarding time by 30%.
- Java | Python | Scala | PySpark | Shell | Git | CI/CD | Docker | Kafka | SQL | Flask | Angular | Markdown

NexTReT Girona, Spain Abr. 2020 - Sep. 2021

Software Engineer

- Designed and developed a wide range of Restful APIs.
- · Built interactive web applications for healthcare, streamlining hospital operations and reducing manual entry by 150%.
- · Java | Python | JS | Shell | Git | CI/CD | SQL | Spring Boot | Angular

${f Additional \ Information}$

Driver's License Category B Relocation Opt. Open to relocation

Lenguistic Skills English (C1), Spanish (Native), Catalan (Bilingual)

Certificates_

- Prevention & Emergency Management, Co-funded by the Erasmus+ Programme of the European Union
- 2022 Spark and Python for Big Data with PySpark, Udemy
- 2022 Advanced Machine Learning, Kaggle
- 2022 Advanced SQL, Kaggle
- 2021 Advanced Functional Programming (FP), University of Helsinki

References

Available upon request