

Marti JIMENEZ

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Education

INSA (National Institute of Applied Science) 4th Year

Master of Engineering, Computer Science

Toulouse, France

09/2020-Today

University of Twente, M1 Exchange Semester

Machine Learning, Deep Learning, NLP, Information Retrieval, Big Data

Enschede, Netherlands

09/2023-02/2024

Experience

Deep Learning Researcher in Oncology, University of Montpellier (Internship)

3 months, 2023

Laboratory of Pathogen and Host Immunity (LPHI), Montpellier, France

- Developed a n-Dimensional non-linear Partial Differential Equations (PDEs) solver framework employing Physics-Informed Neural Networks (PINNs), resulting in an exponential reduction of time complexity compared to traditional methods.
 - Successfully solved a complex 4D non-linear PDE system that captures the evolution of melanoma tumor heterogeneity, utilizing the finite difference method in Julia.
 - Researched and proposed 2 methods to solve interdependent systems of non-linear PDEs with PINNs.
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Projects

marti2405.github.io

- Creation of a dataset for satellite pose estimation with GANs (ongoing project)
 - Privacy protection in CNN models (ongoing project)
 - Image Retrieval with Siamese Networks (2023)
 - Music Genre Classification based on lyrics with Natural Language Processing (2023)
 - Numerical Solutions for Poisson's Equation with Julia (2023)
 - Software for French pronunciation assistance with Signal Processing and Neural Networks (2022)
 - Spanish Word Guessing Game with Word Embeddings (2021)
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Skills

Skills: Machine Learning, Applied Mathematics, Data Structures & Algorithms, Deep Learning, NLP

Programming Languages: Julia, Python, C, Java, Matlab, x86 Assembly

Languages: Native languages: French, Spanish, Catalan. Advanced: English-C1 (TOEIC 965/990)

Activities & Interests

Activities: Pianist, Singer and guitarist in a Rock Band, Road Cyclist, Lacrosse player