

# Marti JIMENEZ

Toulouse, France • [linkedin.com/in/marti-jimenez](https://www.linkedin.com/in/marti-jimenez) • [marti.jimenez.contact@gmail.com](mailto:marti.jimenez.contact@gmail.com) • +33 (0)6 95 13 53 47

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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

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## 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

- 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)

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## Activities & Portfolio

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

**Portfolio:** <https://marti2405.github.io/>