

Noé Boulud

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EDUCATION

EPFL

Lausanne, Switzerland

Master in Computer Science, minor in Neuroscience

Sept 2024 - Ongoing

Relevant Coursework: Distributed Algorithms, Concurrent Algorithms, Machine Learning, MNLP (tbd), Virtual Reality (tbd), Translational neuroengineering (tbd)

- **Machine Learning Sentiment Analysis Project:** Developed and implemented a machine learning model to predict tweet sentiment (positive/negative) using **natural language processing techniques**, including pre-processing, feature extraction, and **deep learning methods**. Conducted a comprehensive comparison of baseline approaches and addressed ethical considerations in sentiment analysis. Completed as part of the Machine Learning course at EPFL.
- **Cardiovascular Disease Prediction Project:** Designed and implemented **machine learning linear models** to predict the likelihood of developing cardiovascular disease based on personal lifestyle factors. Focused on data preprocessing, feature engineering, and model training to optimize predictive accuracy. Completed as part of the Machine Learning course at EPFL.
- **Software Transactional Memory Implementation Project:** Designed and implemented a software transactional memory library to support concurrency and maintain consistency in multi-threaded applications. Focused on developing **efficient algorithms**, including dual-versioned transactional memory and batching mechanisms, while optimizing for performance and correctness. Completed as part of the Concurrent Algorithm course at EPFL.
- **Distributed Algorithms Implementation Project:** Developed **core abstractions** for decentralized systems, including Perfect Links, FIFO Broadcast, and Lattice Agreement, to ensure reliable message delivery and consensus under failure-prone and asynchronous conditions. Focused on optimizing correctness and performance while adhering to system constraints. Completed as part of the Distributed Algorithms course at EPFL.

EPFL

Lausanne, Switzerland

Bachelor in Communication Systems

Graduated in June 2024

Exchange Student of University of Granada, Spain (Spanish-taught classes)

2023-24

Relevant Coursework: Algorithms, Theory of computation, System oriented programming, Functional programming, Introduction to machine learning, General physics: electromagnetism, Probability & statistics.

- Developed digital applications such as Pacman-type (Java), Angry bird-like (Unity), Google maps-like for Swiss bike trails (Java), School management application for disabled students

IFS (International French School of Singapore)

Singapore

Baccalaureate in Sciences – First Class Honors

Graduated in July 2020

WORK EXPERIENCE

SELF INITIATED PROJECT: VIDEO GAME DEVELOPMENT

The objective is to enhance a self-developed coop survival game by implementing two innovative features:

- **Dynamic NPC Interaction:** Develop advanced communication systems for non-playable characters (NPCs) by leveraging machine learning to create more natural and adaptive interactions.
- **Realistic Cord Physics:** Improve the gameplay by refining cord physics, ensuring that cords behave more realistically and smoothly, closely mimicking their movements in real life.

AGEPOLY (EPFL Students general association)

Coaching and mentoring

2021-23

- Mentoring of first year students to help them face work and student life challenges, sharing of work methods and positive encouragements.
- In charge of organizing gatherings, events, and keep in touch with mentees.

UBISOFT Singapore (videogame developer and studio)

Observation intern

June 2018

- This internship was the opportunity to discover the different types of jobs offered by a studio and help them assess new functionalities that they were researching for new games

COMPETENCIES AND PERSONAL INTERESTS

Computer Science

- Algorithms (Distributed & Concurrent)
- Programming (Java Script, C++, C, Python, Assembly, Scala, Html CSS)
- Machine learning and MNLP
- Virtual reality
- Game engines (Unity, unreal)

Languages

- French: native
- English: Fluent
- Spanish: Fluent
- Lived:
 - 9 years in France
 - 7 years in Spain
 - 3 years in Singapore
 - 4 years in Switzerland

Facilitation & group mgt

- **BAFA - French certificate of competency for the duty of facilitator:** Did the academic training to develop the abilities to manage youngster groups for indoor / outdoor activities

Sports

- Captain of the EPFL Football team
- Inter-Erasmus volley-ball competition in Spain
- Vice-champion of badminton in Singapore IFS
- Diving: PADI level 2

