# Ali Ncibi

**Computer science researcher-engineer**

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Europe, Africa, Asia


Computer science researcher and engineer with hands-on experience building software systems and machine learning models through my PhD and early professional or personal projects. I bring theoretical rigor, practical model-development expertise, and a systems-oriented mindset to deliver data-driven, reproducible, production-ready software solutions.

## EXAMPLE PROJECTS

Flux Media Player — December 2025 **(1 month)**
**Personal** Online
A media player and library organizer for personal streaming servers, enabling users to stream and manage IPTV content (Xtream and M3U) through a modern web-based interface. See https://flux-media-player.vercel.app/

Massirah CV Builder — June 2025 **(1 month)**
**Personal** Online
A beautiful, responsive, multilingual web application that helps users create clean, ATS-optimized resumes, enhanced with AI-powered job matching and smart suggestions to improve and tailor CVs for specific roles. See https://massirah.live/

FlowAR (Flows of Activity Recognition) Framework — From 2023 to 2026 **(3 years)**
**PETRUS team, DAVID lab.** Versailles, France
A modular, data-driven operational experimental framework designed to support reproducibility and scientific rigor in the development and evaluation of activity recognition systems. Realized as part of PhD research. See https://github.com/ylaxor/flowar

Relex: a deep-learning-based python package for semantic relations extraction — August 2022 **(1 month)**
**Personal** Online, open-sourced
Released Relex as an open-source project & python package aimed to provide easy-to-use pipelines for building custom and deep-learning based semantic relation extraction systems. Used PyTorch. See https://github.com/ylaxor/relex

Task-oriented dialog systems and conversational AI — From 2021 to 2022 **(1 year)**
**SouthPigalle** Paris, France
Designed and implemented an intelligent chat-bot prototype whose role is to answer users' requests in some specific and technical knowledge context, cf. jewelry/watchmaking.

Temporal links extraction between events found in french text — 2021 **(6 months)**
**INSERM** Clamart, France
Designed, implemented and validated a supervised deep-learning-based solution for the task of temporal links (ISO-TimeML, TLINK) extraction between medical events (concepts) in a french text.

Style transfer between music accompaniments in MIDI format — From 2020 to 2021 **(1 year)**
**LTCI lab., Telecom Paris** Palaiseau, France
Applied deep learning techniques to automatic music generation. Tweaked a generative model (Groove2Groove: https://groove2groove.telecom-paris.fr) for the task.

CNN-based registration of 2D brain tumor images — 2020 **(6 months)**
**LTCI lab., Telecom Paris** Palaiseau, France
Studied a CNN-based approach for brain tumor image registration. Evaluated different training losses and explored the resulting transformations on examples from the BraTS MICCAI brain tumor dataset.

Arrhythmia detection from ECG data — 2019 **(6 months)**
**RISC lab., ENIT** Tunis, Tunisia
Designed and implemented a neural network for arrhythmia detection through the analysis of patient ECG recordings. Evaluated performance on examples from the MIT-BIH Arrhythmia Database.

Network standards for IoT applications in healthcare — 2018 **(6 months)**
**RISC lab., ENIT** Tunis, Tunisia
Reviewed and discussed networking trends for IoT in healthcare applications.

## SELECTED PUBLICATIONS

**Towards Domain-Robust Activity Recognition using Textual Representations of Binary Sensor Events**
**Ali Ncibi**
*18th International Conference on Agents and Artificial Intelligence **(ICAART)**, 2026. https://hal.science/hal-05401764v1*

**FlowAR: A Framework for Data-Driven Development of Human Activity Recognition Systems using Binary S**
**Ali Ncibi**, Luc Bouganim, Philippe Pucheral
*21st International Conference on Distributed Computing in Smart Systems and the Internet of Things **(DCOSS-IoT)**, 2025. https://hal.science/hal-05213603v1*

**FlowAR: une plateforme uniformisée pour la reconnaissance des activités humaines à partir de capteur**
**Ali Ncibi**, Luc Bouganim, Philippe Pucheral
*25ème conférence francophone Extraction et Gestion des Connaissances **(EGC)**, 2025. https://hal.science/hal-04944889v1*

## DATA-SCIENCE TOOLKIT

**Theory**
Descriptive statistics and statistical hypothesis testing, Statistical Machine Learning, Ensemble Learning, Dimension Reduction, Deep Learning, Multi-task Learning, Meta Learning, Self-Supervised Learning, Natural Language Processing, Computer Vision, Graph Mining, Activity Learning,.

**Tools & libraries (development, evaluation and deployment)**
PyTorch, Tensorflow, Keras, Flair NLP, NLTK, Spacy, Transformers, Pandas, Scikit-learn/network/optim, Matplotlib, Seaborn, Plotly, Jupyter, ONNX, Tensorflow Js, Streamlit, Flask, FastAPI, etc.

**Familiar data types and tasks**
- Tabular data: Regression, Classification, Clustering.
- Text data: Text Classification, Named Entity Recognition, Part-of-Speech Tagging, Natural Language Understanding, Natural Language Generation, Text Paraphrasing, Question Answering.
- Image data: Image Classification, Object Recognition, Image Captioning, Image Registration.
- Audio data: Music Generation, Style Transfer.
- Sensor data: Activity Discovery, Activity Recognition, Activity Prediction, Dynamic Segmentation

## EDUCATION

PhD in Computer Science — From March 2023 to February 2026
**University of Paris Saclay** Versailles, France
Focused on the design of structured data-driven pipelines and the evaluation of semantic representation strategies for cross-home human activity recognition from IoT traces.

Master of Science in Data Science — From 2019 to 2021
**Telecom Paris** Palaiseau, France
Focused on numerical optimization, statistical machine learning, computer vision, natural language processing, graph mining, programming, and human & social sciences.

Master of Science in Information Technology and Telecommunications — From 2017 to 2019
**The National Engineering School of Tunis (ENIT)** Tunis, TU, Tunisia
Focused on electronics, signal transmission and processing, networking techniques, programming, databases, and system administration.

Master of Science in Mechanical Engineering — From 2016 to 2017
**Supméca** Paris, France
Completed the first year of the program before shifting focus to a career in IT and computer science.

Preparatory classes for entrance to tunisian/french Grandes Ecoles engineering schools — From 2014 to 2016
**Scientific and Technical Studies Preparatory Institute (IPEST)** Al Marsa, TU, Tunisia
Specialized in mathematics and physics.

## COMPUTER SKILLS

**Programming**
- Python
- C/C++
- C#
- R
- JavaScript
- SQL

## COMPUTER SKILLS

**Web & mobile development**
- HTML5 and CSS3
- React
- Node.js
- Vue.js (Nuxt.js)
- Ionic/Capacitor

**Productivity & authoring tools**
- Latex
- Microsoft Office
- Adobe Creative Suite
- Draw.io

## COMPUTER SKILLS

**Version control**
- Git

**Containerization**
- Docker

## COMPUTER SKILLS

**Operating systems**
- Linux
- macOS
- Windows

**Cloud platforms**
- Amazon Web Services (AWS)
- Google Cloud Platform (GCP)
- Heroku
- DigitalOcean
- Supabase, Vercel, Netlify, etc.

## LANGUAGES

**French**
Fully functional

**English**
Good working knowledge

**Arabic**
Native