

# Abdelmalek Belghomari

📍 France    ✉ abdelmalek.belghomari@ecole.ensicaen.fr    ☎ +33 777 322 951    🌐 vbdelvs.github.io  
in Abdelmalek Belghomari    🐙 vbdelvs

## Education

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**National Engineering School of Caen (ENSICAEN)** Caen, France  
*Msc in Computer Science majoring in Artificial Intelligence, Image and Sound* Sept 2021 – Aug 2025

- GPA: 4.0/4.0
- **Coursework:** Machine Learning(A.Lechervy), Deep Learning(L.Simon), Image Processing(Y.Queau), Software Architecture(R.Clouard), Software Development, Pattern Recognition(L.Brun), 3D Image Synthesis(L.Simon), Computer Architecture, Data Mining(C.Rosenberger)

**Théophile Gautier Highschool** (Preparatory Classes) Tarbes, France  
*Bachelor of Sciences : Preparatory School for top-ranking French establishments* Sept 2018 – June 2021

- Graduated with High Honours
- **Coursework:** Algebra, Analysis, Computer Science, Mechanics/Fluid Mechanics, Electromagnetism, Quantum Physics, Chemistry, English, French & Philosophy

## Experience

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**Shibaura Institute Of Technology — Neural Information Systems Laboratory** Tokyo, Japan  
*Research Intern — Supervisor: ✉ PhD Ryosuke Hosaka* May 2024 – Aug 2024

- Created an **efficient Liquid State Machine model** using NEST-Simulator for chaotic time-series data prediction
- Researched and implemented Machine Learning and Deep Learning algorithms, Reservoir Computing models and Spiking Neural Networks
- Attended the **IEEE World Congress on Computational Intelligence** in Yokohama, Japan, to engage with researchers on AI and Spiking Computing
- Demonstrated quick adaptation to new fields and language

## Projects

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**AI Chatbot for LCL Bank — LCL Hackathon & Google Cloud** Sept 2024

- Ranked : 3<sup>rd</sup> place
- Tools Used: Google Cloud Platform, Python, HTML/CSS/JS, React.js, Docker, Firebase, Langchain

**Recognition of person and text by sound keystrokes on a laptop keyboard** 2023 - 2024  
**ENSICAEN & GREYC**

- Researched about **CNNs and Transformers** for sound recognition
- Achieved signal processing to detect keystrokes from a laptop microphone capturing the ambient noise
- Tools Used: Python, MATLAB, TensorFlow, MFCC, Gitlab/Github

**Goose Game — Academic project** 2023

- Built a board game in a 7-member team using Agile development organisation
- Used the Software Architecture *SOLID* principles and design patterns
- Tools Used: Java, JavaFX, Scene Builder

## Skills

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**Languages:** French (native), English (Fluent), Spanish (Intermediate), Japanese (Beginner)

**Programming :** C++, C, Python, Java, HTML, CSS, JavaScript, PHP, SQL, Kotlin, Swift, MATLAB

**Technologies:** TensorFlow, PyTorch, Scikit-Learn, L<sup>A</sup>T<sub>E</sub>X, Google Cloud, Qt, JavaFX, Jakarta EE

**Interests:** Swimming (Top 160 world at my best), Entrepreneurship, Working-out, Fashion, Cuisine