Pierre-Minh TRAN

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Engineer in intelligent systems and control, I have designed predictive models and optimized industrial processes through automation and signal processing. My experience in data analysis and in developing **monitoring tools** on distributed infrastructures enables me to deliver **data-driven** and **reliable solutions** in complex environments.

EDUCATION

Grenoble INP - ENSE³, UGA
Engineering Degree in Intelligent Systems and Control

Grenoble, France
Graduation expected in 2026

- Design and implementation of **control algorithms** (**PID, state-space**) for industrial automation
- Developed **ML models** for process optimization and fault detection in industrial environments
- Practical work with **embedded systems**, robotics, and **industrial networks** for real-time control
- Focused on **physics-based models** of energy systems and the automation of renewable energy grids
- Applied **signal filtering and analysis techniques** to improve system accuracy and robustness

Preparatory Classes for French Engineering Schools (CPGE)
Physics and Technology (PT)

Paris, France
Sep 2021 - Jun 2023

- **Classes:** Advanced Mathematics, Physics, Engineering Sciences, Computer Science

SKILL SUMMARY

Languages: French (Native), English (Fluent - Linguaskill), Spanish (A2)

Programming Languages: Python, Matlab/Simulink, Java, SQL

Software: JMP (Statistics), ImageJ, Microsoft Office Suite, Git, Docker, Grafana, Linux environment

Libraries: Scikit-learn, Pandas, NumPy, Matplotlib, Redis, Flask

Interests: Artificial Intelligence, Blockchain/Cryptocurrency, 3D Modeling, Web Development

WORK EXPERIENCE

BioMerieux | R&D departement
Engineer Intern

Craponne, France
Summer 2024

- Led a **metrological measurement campaign** for bioMérieux's TEMPO product line
- Analyzed **30 different sample cards** using **JMP** for statistical analysis
- Automated the acquisition process with CellSens microscope and post-processing with **ImageJ (Java)** and **Python**
- Developed an application that **saved over 40 hours** of manual analysis time by fully automating the workflow
- Optimized calibration processes, ensuring **compliance with industry standards**

PROJECTS

Blockchain Analysis Tool | 200h
Open source coding project

Grenoble, France
Jul 2024

- Developed an open-source tool to fetch and analyze wallet transactions, optimizing for data accuracy and real-time insights
- **Trained an AI model** to predict and classify wallets based on historical transaction data from the Solana blockchain
- Designed a 4-node Raspberry Pi cluster with load balancing through Redis, enabling distributed computation
- Built a data pipeline that stores transaction data in a **PostgreSQL database** for further analysis and **AI model training**
- Implemented a **Grafana dashboard for real-time monitoring** and system performance tracking

Real-Time Signal processing on a Sensor-Embedded System | 50h [link](#)
Open source project

Grenoble, France
Apr 2024 - Jun 2024

- Developed a real-time signal detection system using **Python**, applied to a wooden board with embedded piezoelectric sensors
- Designed and optimized a real-time signal processing system, **achieving classification within 250 ms**
- Applied **inter-correlation methods** for signal normalization, improving detection robustness and reliability
- Achieved 100% classification accuracy using **k-Nearest Neighbors (k-NN) machine learning**