

VALÉRIAN MANGÉ

PhD student in signal processing, specialized
in data fusion and anomaly detection

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PROFESSIONAL EXPERIENCE

Thesis CIFRE-DGA in Signal Processing

TéSA / Hensoldt Nexeya France (HNF)

Oct 2022 - Dec 2025

Toulouse, France

- Combining AIS/radar/ESM data for maritime surveillance
- Detect abnormal ship trajectories
- Thesis for HNF supervised by the TéSA laboratory and co-financed by the French Defense Agency (DGA)

Internship Big Data / Data Analyst

Valeo

April 2022 - Sept 2022

Créteil, France

- Analysis of the integration chain with Big Data processing
- Study of the contribution of AI in this analysis

EDUCATION

PhD in signal processing

TéSA / Hensoldt Nexeya France

Oct 2022 – Dec 2025

Toulouse, France

FUSCHIA (Fusion and correlation of heterogeneous data with artificial intelligence)

Computational Science and Engineering (Exchange)

École Polytechnique Fédérale de Lausanne (EPFL)

Sept 2021 – Feb 2022

Lausanne, Switzerland

Courses on artificial intelligence, data analysis, computational methods applied to quantum physics, software engineering, and image processing

Master's Degree in Computer Science

ENSEEIHT

Sept 2019 – Sept 2022

Toulouse, France

Engineering school in computer science with specialization in applied mathematics, high performance computing and Big Data

Middle School

Quality School International (QSI)

Sept 2008 – July 2012

Shenzhen, China

International American school, member of the QSI network

ABOUT ME

"PhD student in signal processing with international experience, ready to take on your challenges"

SKILLS

Soft

Teaching Cultural intelligence

Assertiveness Thinking outside the box

Prioritization and ranking

Hard

Python Matlab Data fusion

Anomaly detection Statistics

LANGUAGES

French



English



Spanish



TEACHING

Computer science courses

ENSEEIHT

2022 - 2025

Toulouse, France

- Statistics 30h, exercise sessions
- Data analysis 35h, practical sessions
- Optimization 5h, exercise sessions

REFERENCES

Prof. Jean-Yves Tourneret

@ ENSEEIHT

jean-yves.tourneret@toulouse-inp.fr

Prof. François Vincent

@ ISAE-SUPAERO

francois.vincent@isae-supapro.fr

PUBLICATIONS (WWW.TESA.PRD.FR/PUBLICATIONS/)

Patents

- V. Mangé, J.-Y. Tourneret, F. Vincent, and F. Manzoni Vieira, "**(Pending)** Procédé d'association de données de trajectoires issues de capteurs," 2025.
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Journal Articles

- V. Mangé, J.-Y. Tourneret, F. Vincent, L. Mirambell, and F. Manzoni Vieira, "Anomaly Detection in Ship Trajectories Using Machine Learning and Dynamic Time Warping," *Engineering Applications of Artificial Intelligence*, vol. 157, p. 111 185, 2025.
 - C. Balsa, M. Silveira, V. Mangé, and P. A. G. Piloto, "Modelling the Thermal Effects on Structural Components of Composite Slabs under Fire Conditions," *Computation*, vol. 10, no. 6, 2022.
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Conference Proceedings

- V. Mangé, Y. Anezin, J.-Y. Tourneret, F. Vincent, L. Mirambell, and F. Manzoni Vieira, "Detecting Abnormal Ship Trajectories using Functional Isolation Forests and Dynamic Time Warping," in *EUSIPCO*, Lyon, France, 2024.
- V. Mangé, J.-Y. Tourneret, F. Vincent, L. Mirambell, and F. Manzoni Vieira, "Track-to-Track AIS / Radar Association and Uncertainty Estimation by Coherent Point Drift," in *EUSIPCO*, Lyon, France, 2024.
- R. Mignot, V. Mangé, K. Usevich, M. Clausel, J.-Y. Tourneret, and F. Vincent, "Anomaly Detection Using Multiscale Signatures," in *EUSIPCO*, Lyon, France, 2024.
- V. Mangé, J.-Y. Tourneret, F. Vincent, L. Mirambell, F. Manzoni Vieira, and B. Pilastre, "Détection de comportements anormaux dans des trajectoires de navires avec One-Class SVM et Dynamic Time Warping," in *Colloque Gretsi*, Grenoble, France, 2023.