Julien de Saint Angel

Data Scientist | Data Analyst | PhD in Applied Computer Science

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PROFILE

PhD in Applied Computer Science (2025), expert in complex data exploitation and predictive modeling. Specialized in Deep Learning and Computer Vision, I am able to understand business problems and provide robust, production-ready technical solutions. I leverage statistical analysis and anomaly detection to transform raw data into strategic decision-making insights.

SKILLS

- **AI / Machine Learning:** CNNs, Transformers, autoencoders, hyperspherical models, SVDD, anomaly detection, NLP, LLMs, RAG.
- **Frameworks & Libraries:** Python, PyTorch, TensorFlow, Scikit-learn, OpenCV, Pandas, FastAPI.
- **MLOps & Tools:** Git, Docker, Jupyter, Linux, ML pipelines.
- **Mathematics & 3D:** Optimization, PDEs, conformal geometry, signal processing, Fusion 360, SolidWorks.

R&D PROJECTS & INNOVATION

Nova – Intelligent AI Assistant Agent rentime.orbitalis.fr

- **Calendar & Email Management:** Automated scheduling and draft email generation with bidirectional interactive speech synthesis.
- **Automated Monitoring & Intelligence:** Automated tracking of AI-related information and real-time alerts on industry updates.

MIA & JobScope – AI Web Platforms orbitalis.fr

- **Conversational Agent (LLM + RAG):** Full document ingestion, embeddings, and vector database for semantic querying of CVs and profiles.
- **JobScope:** Automated intelligent semantic matching engine between CVs and job offers.

PROFESSIONAL EXPERIENCE

PhD Candidate / R&D Engineer – AI and Machine Learning | *La Rochelle University (MIA)* **2020 – 2025**

- Development of a **training method enabling hyperspherical layers to be effectively initialized**.
- Proposal of a **novel anomaly detection method derived from SVDD**, robust on real-world datasets.
- Scientific contributions: Data analysis with publications at ICMLA, GRETSI, and ORASIS.

Research & Engineering Internships **2015 – 2019**

- **XLIM (UMR 7252):** Sports gesture characterization using high-speed cameras (trajectory analysis of key points).
- **LIENSS (UMR 7266):** Design of a visual tide gauge (automated reading of tide scales using computer vision).
- **SYRTE (UMR 8630) - Paris Observatory:** Satellite orbit interpolation algorithms (numerical simulation of ordinary differential equations).

Mathematics Teacher | *Saint-Exupéry High School, La Rochelle* **2015 – 2017**

- Scientific communication, teaching, and team management.

EDUCATION

PhD in Applied Computer Science | University of La Rochelle **2025**
Thesis: Hyperspherical Neural Networks for Anomaly Detection.
Master's Degree in Mathematics and Applications | With Honors, University of La Rochelle **2019**
Master's Degree in Astronomy & Physics | Paris Observatory (Meudon) **2015**
Master's Degree in Mathematics & Teaching Certification (CAPES) | University of La Rochelle **2014**
Bachelor's Degree in Mathematics | University of La Rochelle **2012**

PUBLICATIONS & ADDITIONAL INFORMATION

- **Publications:** *Multi-Spheres Anomaly Detection* (ICMLA 2024), *Improving Multi-Sphere Anomaly Detection* (2025), *Hyperspherical Layers via CGA* (ORASIS 2021).
- **Languages:** French (native), English (B2 written), Spanish & Romanian (B1).
- **Interests:** Astrophotography, bird photography, 3D modeling, video editing (After Effects).