Adhémar de Senneville

Website ◇ Mail ◇ GitHub ◇ LinkedIn

Education

Pre-doctoral Research — Centre Borelli, ENS Paris-Saclay, France
Few-shot learning methods for drone and satellite imagery — 2025

Master 2 MVA — ENS Paris-Saclay, France
GPA: **17.6/20** — 2023 – 2024
- Time Series, Convex Optimization, Deep Learning, Signal Processing, Remote Sensing Data, Reinforcement Learning

Aerospace Engineering — ESTACA, France
Valedictorian — 2019 – 2023
- Mathematics and Computer Science, Control and Systems, Mechanics and Energetics, Aerospace Systems

International Semester — University of Southampton, UK
GPA: **4.0** — 2023
- Deep Learning Technologies, Computational Aerodynamics, Orbital Mechanics, Hypersonic Gas Dynamics

Professional Experience

Research Internship — NASA Jet Propulsion Laboratory, USA
Deep Learning and Signal Processing — May – Oct 2024
- Design new deep-learning models for interference detection and mitigation in satellite radio signal.

Research Internship — CNES Toulouse, France
AI and Thermal Control — Jun - Sep 2023
- Applied genetic algorithms and thermal modeling tools to enhance spacecraft simulation accuracy.

AI Consultant - NLP — e-Territoire, France
AI Integration for automated labeling and better search engine — 2023 – 2024

AI Consultant - Computer Vision — Aerobat, France
Computer Vision for Drones — 2023 – 2024

Competitions

Dassault Challenge — **1st Place** (2022–2023)
Developed an innovative Tail-Sitter drone for agricultural assistance. — with Dassault Aviation
- Image Processing, SLAM, Aerodynamic Optimization, Bicopter Control.

Safran Challenge — **1st Place** (2021–2022), **2nd Place** (2020–2021)
Programmed drones for speed racing and terrain/object reconnaissance. — with Safran
- YOLO, SLAM, EfficientNet, Python, C++.

EDTH Hackathon — **3rd Place**/34 (November 2024)
Built a functional drone for anti-helicopter missions in 24 hours. — with Helsing and others...
- Audio Signal Processing, Optical Tracking, Deep Learning.

ISAE Challenge — **3rd Place** (2022–2023)
Applied deep reinforcement learning for autonomous drone racing. — with ISAE group
- Proximal Policy Optimization, Multi-Sensor Fusion, Computer Vision, Simulation.

Publications

1. Adhémar de Senneville, Dennis Ogbe, Zaid Towfic. **Machine Learning for Interference Detection and Mitigation on Space Telecom Software-Defined Radio Signals**. *Advanced Technologies Session, ENS Paris-Saclay and Jet Propulsion Laboratory, California Institute of Technology, 2025.* Under review