Estelle **Chigot**

PhD in Computer Vision

Toulouse, France

echigot.github.io | echigot | estelle-chigot | Estelle Chigot

Experience

PhD in Computer Vision
Toulouse, France

Airbus & ISAE-SUPAERO *2023 – June 2026*

- Researcher within the vision-based navigation team at Airbus.
- Designed a diffusion-based style transfer method, using foundation models and transformer architectures, for robust synthetic-to-real domain adaptation with a focus on challenging weather conditions (CVIU 2025).
- Proposed an evolutionary algorithm-based optimization framework for style transfer pipelines (EvoStar 2026).
- Evaluated the impact of simulated data and domain adaptation methods for Airbus runway detection model (CAIP 2025).
- Applied and benchmarked synthetic-to-real style transfer models for runway images across challenging weather subgroups (DASC 2026).
- Taught computer vision (generative models), machine learning, object-oriented programming, evolutionary optimization and Bash/Python.
- Co-supervised two research interns (2024, 2025). The topics covered were the influence of text in vision-language generative models and class-wise style transfer.

Computer Vision Researcher
Toulouse, France

Thales AVS *2021 – 2022*

- Developed a Unity-based synthetic data generation pipeline using domain randomization for embedded drone detection.
- Trained and evaluated embedded drone detection models.
- Compared 3D generated datasets with GAN-based generation approaches.

Research Intern
Toulouse, France

ISAE-SUPAERO *2021*

- Designed a co-evolutionary policy search strategy for video games (GECCO-W 2022).

Software Consultant
Remote, France

RTE *2020 – 2021*

- Developed two open-source plugins for the FledgePOWER multi-protocol translation gateway.

Research Intern
Tsukuba, Japan

University of Tsukuba *2019*

- Proposed a procedural generation algorithm for settlements in video games.

Education

PhD in Computer Vision
Toulouse, France

ISAE-SUPAERO *2023 – June 2026*

- Research topic: Synthetic-to-Real Image-Based Domain Adaptation for Robust Object Recognition.
- PhD in collaboration with Airbus.
- Advisors: Thomas Oberlin, Dennis G. Wilson, Meriem Ghrib, Manon Huguenin.

MSc in Engineering
Toulouse, France

ENSEEIHT *2019 – 2022*

- Major in Computer Science for Multimedia.
- Software engineering, artificial intelligence, computer vision including 3D reconstruction, camera calibration.

University Degree in Technology
Bordeaux, France

University of Bordeaux *2017 – 2019*

- Major in Computer Science.

Publications

Style Transfer with Diffusion Models for Synthetic-to-Real Domain Adaptation,

Estelle Chigot, Dennis G. Wilson, Meriem Ghrib, Thomas Oberlin. *Computer Vision and Image Understanding, 2025*.

Multi-Objective Optimization for Synthetic-to-Real Style Transfer,

Estelle Chigot, Thomas Oberlin, Manon Huguenin, Dennis G. Wilson. *International Conference on the Applications of Evolutionary Computation (Part of EvoStar), 2026*.

Synthetic Data for Robust Runway Detection,

Estelle Chigot, Dennis G. Wilson, Meriem Ghrib, Fabrice Jimenez, Thomas Oberlin. *International Conference on Computer Analysis of Images and Patterns, 2025*.

Enhancing Runway Detection Models with Synthetic-to-Real Style Transfer,

Estelle Chigot, Solène Barrat, Manon Huguenin, Dennis G. Wilson and Thomas Oberlin. *Digital Avionics Systems Conference, 2026*.

Coevolution of neural networks for agents and environments,

Estelle Chigot and Dennis G. Wilson. *Proceedings of the Genetic and Evolutionary Computation Conference Companion, 2022*.

Teaching

ISAE-SUPAERO

- **Computer Vision – Image Generation** (3h) MSc 2
- **Machine Learning Hackaton** (44h) MSc 2
- **Evolutionary Computation** (15h) MSc 1
- **Bash & Python** (15h) MSc 2

ENSEEIHT

- **Object-Oriented Programming** (48h) BSc 3

Skills

Languages: French (Native), English (Proficient), German (Beginner)
Programming Languages: Python, Java, C++, C#
Deep Learning: PyTorch, TensorFlow, Generative modeling, Foundation models, Self-supervised learning
Tools: Linux, Docker, Slurm, AWS, Bash, Git, Unity, W&B
Interests: Dance, Video games, Baking, Reading