Estelle **Chigot**

PhD Candidate in Computer Vision

Toulouse, France

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Skills

Languages: French (Native), English (Proficient), German (Beginner)
Programming Languages: Python, Java, C++, C#
Deep Learning: PyTorch, TensorFlow
Tools: Linux, Docker, Slurm, Bash, Git, Unity
Interests: Dance, Video games, Baking, Reading

Experience

Industrial PhD Candidate — *Toulouse, France*

Airbus & ISAE-SUPAERO — *2023 – June 2026*

- Researcher within the vision-based navigation team at Airbus.
- Designed a diffusion-based style transfer method for synthetic-to-real domain adaptation using segmentation maps, with a focus on adverse 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 under adverse conditions.
- Taught computer vision (generative models), machine learning, object-oriented programming, evolutionary optimization and Linux/Python to Master students.
- Supervised two research interns (2024, 2025).

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.

Selected 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. *Under review*.

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.
- Industrial 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.

University Degree in Technology

Bordeaux, France

University of Bordeaux

2017 – 2019

- Major in Computer Science.