Fabien Delattre

PhD candidate in Computer Vision

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Summary

PhD candidate in Computer Vision with a focus on 3D geometry. I have extensive industry experience in computer vision and machine learning across research and production engineering, including work on the monocular-to-stereo post-production pipeline at Disney Research Studios, multi-view temporal video alignment at Dolby Laboratories, and super-resolution models for video conferencing at Samsung. Previously, I co-founded a web development agency where I led projects end-to-end, from requirements to deployment.

Education

University of Massachusetts Amherst — *Amherst, MA*
PhD in Computer Science · GPA: 4.0/4.0 — *Sept 2020 – (May 2026)*
Computer Vision Research Laboratory, Advisor: Prof. Erik Learned-Miller

MS in Computer Science · GPA: 4.0/4.0 — *Sept 2019 – May 2020*
Relevant coursework: Computer Vision, Neurodynamics, Reinforcement Learning, Neural Networks, Artificial Intelligence, Distributed and Operating Systems

ISEN, School of Engineering — *Lille, France*
Diplôme d'Ingénieur (MS in Engineering), Computer Science — *Sept 2014 – May 2019*
Relevant coursework: Artificial Intelligence, Big Data, Linear Algebra, Data Structures, Advanced Algorithms

Research Experience

Computer Vision Intern — *Zürich, Switzerland*
Disney Research Studios — *June 2025 - Sept 2025*
Developed monocular-to-stereo conversion components for the post-production pipeline, enabling 2D films to be delivered in 3D.

Research Intern — *Sunnyvale, CA*
Dolby Laboratories — *May 2024 - Aug 2024*
Developed a method to temporally align videos captured from moving cameras across arbitrary viewpoints.
Hosted by Dr. Tsung-Wei Huang. Accepted at WACV 2026.

Research Intern — *Cambridge, MA*
Mitsubishi Electric Research Laboratories — *May 2023 - Aug 2023*
Worked on camera motion estimation and calibration.
Hosted by Dr. Pedro Miraldo.

Research Intern — *Cambridge, MA*
Mitsubishi Electric Research Laboratories — *May 2022 - Aug 2022*
Developed a method to robustly estimate the camera rotation in the presence of moving objects.
Hosted by Dr. Michael Jones. Accepted at ICCV 2023.

Research Assistant — *Amherst, MA*
University of Massachusetts Amherst
Built an event-camera based reinforcement learning system for visual balancing. — *Jan 2026 - Apr 2026*

Worked on self-supervised representation learning, object detection, and distribution modeling for scene-centric videos as part of the DARPA L2M program. — *Aug 2019 - Dec 2019*
Published in Neural Networks (2023).

Machine Learning Applied Research Intern *Paris, France*
Samsung Strategy and Innovation Center *May 2019 - Aug 2019*
Developed GAN-based image enhancement models for video conferencing, including super-resolution, background removal, and reflection removal.

Machine Learning Intern *Rungis, France*
Thales *May 2018 - Aug 2018*
Developed machine learning models for classification and clustering of aircraft trajectories for Air Traffic Management.

Publications and Preprints

Human Pose Aggregation for Multi-View Temporal Video Alignment
Fabien Delattre, Tsung-Wei Huang, Guan-Ming Su and Erik Learned-Miller.
2026 IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) (2026).

Robust Frame-to-Frame Camera Rotation Estimation in Crowded Scenes
Fabien Delattre, David Dirnfeld, Pha Nguyen, Stephen Scarano, Michael J. Jones, Pedro Miraldo and Erik G. Learned-Miller.
2023 IEEE/CVF International Conference on Computer Vision (ICCV) (2023): 9718-9728.

C-14: assured timestamps for drone videos
Zhipeng Tang, ***Fabien Delattre***, Pia Bideau, Mark D. Corner and Erik G. Learned-Miller.
Proceedings of the 26th Annual International Conference on Mobile Computing and Networking (2020): n. pag.

FLIGHT: Fibonacci Lattice-based Inference for Geometric Heading in real-Time
David Dirnfeld, ***Fabien Delattre***, Pedro Miraldo and Erik G. Learned-Miller.
ArXiv 2602.23115 (2026): n. pag.

RealBirdID: Benchmarking Bird Species Identification in the Era of MLLMs
Logan Lawrence, Oindrila Saha, Rangel Daroya, Mustafa Chasmai, Wuao Liu, Max Hamilton, Aaron Sun, Seoyun Jeong, ***Fabien Delattre***, Subhransu Maji and Grant Van Horn.
2026 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) (2026)

A Domain-Agnostic Approach for Characterization of Lifelong Learning Systems
Megan M. Baker, Alexander New, Mario Aguilar-Simon, Ziad Al-Halah, Sébastien Arnold, Ese Ben-Iwhiwhu, Andrew Brna, Ethan Brooks, Ryan Brown, Zachary Alan Daniels, Anurag Reddy Daram, ***Fabien Delattre***, et al.
Neural networks : the official journal of the International Neural Network Society 160 (2023): 274-296.

Self-supervised visual feature learning with curriculum
Vishal Keshav and ***Fabien Delattre***.
ArXiv 2001.05634 (2020): n. pag.

Minimum commitment Loss for Semantic Segmentation with partial labels
Fabien Delattreand Vishnu Balakrishnan
fabiendelattre.com/mincommitment

Entrepreneurship and Software Engineering Experience

Co-founder & Full-stack developer *Paris, France*
Liigem *Oct 2016 - Oct 2019*
Full-Stack developer on several client projects. Startup incubated at Euratechnologies and Village by CA; built a conversational appointment-scheduling agent.

Web Developer *Saint-Cloud, France*
Self-employed *Jan 2015 - Oct 2016*
Web development and maintenance for companies and non-profits.

Teaching Experience

Teaching Assistant *Amherst, MA*
University of Massachusetts Amherst

- CS670: Computer Vision (Graduate level), *(Spring 2024, Fall 2024)*
- CS574/674: Intelligent Visual Computing (Graduate level), *(Spring 2023)*
- CS250: Introduction to Computation, *(Fall 2020)*
- CS230: Computer systems principles, *(Spring 2021, Fall 2022)*

Mentor *Oct 2016 – Aug 2019*
OpenClassrooms.com
Mentored students for training programs:

- Multimedia Project Manager
- Junior Web Developer
- Data Analyst

Fellowship

Thesis Proposal Writing Fellowship, Award: $16k

Talks and Presentations

Mar 2024 - "Robust Camera Motion Estimation". Invited talk. MathWorks, Vision team, Natick, MA,
Dec 2022 - New England Computer Vision Workshop (NECV 2022). Selected presentation. MIT, Cambridge, MA.

Service to the Academic Community

Reviewer for the following conferences:

- Conference on Computer Vision and Pattern Recognition (CVPR): 2023, 2024, 2025, 2026
- European Conference on Computer Vision (ECCV): 2024

Skills

Languages	Python, C++, C
ML & CV	PyTorch, OpenCV, Scikit-learn, NumPy
Infra & Tools	Linux, Git, Slurm, AWS, Weights & Biases, MLflow, LaTeX
Additional	Full-stack Web (Vue.js, Laravel, Django, SQL)
	Classically trained cellist (Certificat d'Études Musicales, France)