


Lionel Blondé

(Lee-oh-nel Blon-deh)

Geneva, Switzerland. Mail: mail@lionelblonde.com. GitHub: 

PH.D. RESEARCH SCIENTIST WITH INDUSTRY EXPERIENCE AT APPLE AND STARTUPS.
APPLIED RESEARCH IN BIOROBOTICS AND REMOTE SENSING (DRONES AND SATELLITES).

EDUCATION **Ph.D. in Computer Science** (Machine Learning) 2015–2021
University of Geneva, Switzerland

- Research: Reinforcement Learning, Imitation Learning, Counterfactuals.
- Passed with **Highest Honors**. Committee: Brian Ziebart, François Fleuret.
- Advisors: Stéphane Marchand-Maillet, Alexandros Kalousis.

M.Sc. in CS and Applied Mathematics 2011–2014
ENSEEIH, Toulouse, France – Top-ranked French Grande École in engineering

- Meteorology dual major @ENM; University swimming championships.
- Coding Highlights: recreated `.tar` in OCaml, *Lemmings*^❶ in Java.

“Classes préparatoires aux Grandes Écoles”^❶ 2009–2011

Physics and Mathematics.

SKILLS (proficient) **Python, PyTorch, TensorFlow**, NumPy, Java, Scala, Spark, OCaml,
Docker, MPI (exposure) JAX, Fortran, OpenMP, The Rocq Prover, C++, ADA

SELECTED PUBLICATIONS *(ordered from most recent)*

With: Joao C. Ramos. “Noise-Guided Transport: Imitation Learning from Random Priors”. In ICML 2026.

With: V. K. Nguyen. “Stein Diffusion Guidance: Sampling Beyond High-Density Regions”. In ICML 2026.

With: Joao C. Ramos, Naoya Takeishi, Alexandros Kalousis.

“Mimicking Better by Matching the Approximate Action Distribution”. In ICML 2024.

With: Pablo Strasser, Alexandros Kalousis. “Lipschitzness Is All You Need To Tame Off-policy Generative Adversarial Imitation Learning”. Published in Springer Nature Machine Learning, 2022. †CONCURRENT WORK: “What Matters in Off-policy GAIL” from Google DeepMind (high impact).

With: Alexandros Kalousis. “Sample-Efficient Imitation Learning via Generative Adversarial Nets”. In AISTATS 2019. †CONCURRENT WORK: DAC from Google Brain (now DeepMind) (high impact).

EXPERIENCE **Perpetual Altruism, London** (FinTech startup, £15M in funding) 2022–2023
Research Scientist/Engineer – Microeconomics, Tokenization, Game Theory

- Designed and engineered a suite of models and tools that enables the codeless design of ICO strategies in accordance to their disruptive novel auction system.

Apple, Cupertino, California Spring–Summer 2019
Machine Learning Research Scientist Intern – MLR team

- Mentors – Russ Webb, Yichuan Tang (whose advisor was Geoffrey Hinton)
- Designed a self-attentive visual imitation learning technique providing the agent with the ability to consider long-range relationships in pixel input.
- Collaborated with and learned from Apple research scientists and engineers.
- Experienced the shift between leading research in academia and the industry.

❶ **Secured** a post-grad employment **offer** (rescinded due to COVID-19 disruptions).

University of Geneva, Switzerland 2015–2022 and 2023–**current**
Machine Learning Ph.D. Research Assistant, then Research Scientist

- Conducted cutting-edge research in Imitation and Reinforcement Learning.
- Strong track record of successfully owning research projects from start to finish.
- (*collab.* EPFL Biorobotics Lab) Aligned bio-accurate neuromuscular locomotion sim. with impaired patient gaits, obtaining their digital twin (healthcare).
- (*collab.* Geneva U. Hospitals Kinesiology Lab) Predicted gaits of cerebral palsy patients (MoCap). NORTH STAR: predict surgery outcome on gaits (**wip**).
- Mentored M.Sc. and Ph.D. researchers into top-performing scientists.
- (*collab.* EU project incl. 15 partners) Designed a distributed platform (HDFS, Hive, Kafka, Spark, Zeppelin) to analyze streaming and batch data from UXVs.
- (*collab.* ECMWF) Developed, trained, and deployed a label-efficient remote sensing approach using contrastive learning (PyTorch, Kubernetes, KServe).
- Taught a M.Sc.-level Machine Learning class—course I crafted from scratch.
- Wrote multiple grants that resulted in funding for Ph.D. programs (X millions).
- (*collab.* UTokyo, JAXA) Worked on physics-integrated neural systems (**wip**).
- Worked on transformer-based world models and imitation learning (**wip**).
- Advised on RLHF strategy at AI voice startup, with META co-advisor.
- Peer reviewer for ICML, NeurIPS, ICLR, plus workshops.

Atos, Toulouse, France Spring–Summer 2014
Data Science Intern – large-scale distributed remote sensing and NLP

- Developed image processing solutions for remote sensing on GIS data sources.
- Leveraged Hadoop Pipes to allow the use of C++ code in MapReduce programs.
- Conducted large-scale graph-parallel computations (Spark GraphX, Scala).
- Forayed into NLP: building on Word2Vec in Eclipse Deeplearning4j (Java).
- Secured a post-grad employment offer; opted to pursue a Ph.D. instead.

Institute of CS Research, Toulouse, France Summer 2013
Optimal Control Research Intern – Aircraft Conflict Resolution

- (*collab.* ENAC) Modeled and solved heavily-constrained optimal control problems for three-dimensional multi-aircraft automated conflict resolution.
- Integrated constraints derived from strict Air Traffic regulations.
- Studied the integration of the designed tool in air traffic control.

Siberian Federal University, Krasnoyarsk, Russia Summer 2012
Network Design Intern – Aerospace Department

Roche, Basel, Switzerland High School Summers
Pharmaceutical Preformulation Intern

LANGUAGES (fluent) French, English (intermediate, wip) German

INTERESTS Autonomous mobility, world models, nowcasting, open water swimming (ex-national pool swimmer: 100-200 m breaststroke, 400 m medley), and ergo keyboard tinkering.

REFERENCES Russ Webb, Director at **Apple**, rwebb@apple.com
Yichuan Tang (advisor: Hinton), VP of ML at **D.E. Shaw**, tang@cs.toronto.edu
Stéphane Marchand-Maillet, UNIGE Prof., stephane.marchand-maillet@unige.ch