



ARNAUD PANNATIER

PHD CANDIDATE IN ATTENTION-BASED MODELS

PhD Candidate within Pr. François Fleuret's Machine Learning group (Idiap Research Institute, EPFL), primarily focusing on attention models and their adaptability to various domains, ranging from wind prediction, air traffic control, vision, to natural language processing. I collaborate closely with companies on practical problems using real-world data.

EDUCATION

PhD in Machine Learning

Innosuisse, with SkySoft ATM
Idiap Research Institute, EPFL
2020 - 2024

Master in Computer Sciences and Engineering

Math Faculty, EPFL
2017 - 2020

Bachelor in Physics

Physics Faculty, EPFL
2014 - 2017

LANGUES

French : Native speaker
English : Fluent
German: Basic knowledge

SKILLS

Expert : PyTorch, Python, Javascript
Advanced: Jax, C++, Go, Django, Matlab
Basic : Docker, SQL, PHP, Swift

INFORMATIONS

Rue des Longs-Prés 40
3960 Sierre
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Born September 20, 1995, in Sion, Valais
Married, two children (born 2022, 2023)

REFERENCES

François Fleuret, francois.fleuret@unige.ch
Michael Liebling, mliebling@idiap.ch
J.-C. Chappelier, jean-cedric.chappelier@epfl.ch

PUBLICATIONS

A. Pannatier, E. Courdier, F. Fleuret **σ -GPTs: A New Approach to Autoregressive Models.** In *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD) 2024*

A. Pannatier, K. Matoba, F. Fleuret **Inference from Real-World Sparse Measurements** In *Transactions on Machine Learning Research (TMLR)*, 2024

F. Mai, A. Pannatier, F. Fehr, H. Chen, F. Marelli, F. Fleuret, J. Henderson **HyperMixer: An MLP-based Low Cost Alternative to Transformers.** In *Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL)*, 2023. DOI: 10.18653/v1/2023.acl-long.871

A. Pannatier, R. Picatoste, and F. Fleuret. **Efficient Wind Speed Nowcasting with GPU-Accelerated Nearest Neighbors Algorithm.** In *Proceedings of the SIAM International Conference on Data Mining (SDM)*, 2022. DOI: 10.1137/1.9781611977172.37

A. Pannatier **A Control Plane in Time and Space for Locality-Preserving Blockchains** In *Master Thesis, Decentralized Distributed Systems Laboratory (DEDIS), EPFL*, 2020
Price: Kudelski Award

TEACHING EXPERIENCE

Teaching Assistant, EPFL

- Advanced Analysis 1-2 Pr. Stubbe, 2016, 2017, 2018
- Analysis 2 Pr. Buffoni, 2018
- Advanced Analysis 3 Pr. Krieger, 2018
- Introduction à l'apprentissage automatique Pr. Liebling, 2020, 2023
- Deep Learning Pr. Fleuret, 2021, 2022
- Information, Computation, Communication Pr. Chappelier, 2020, 2022, 2023

Substitute Math Teacher

Lycée Collège de la Planta
Mathematics, Advanced Mathematics
Mme Jordan, Mme Veuthey, Mr. Petit 1-5e, 2017 - 2019

WORK EXPERIENCE

Software engineer

Caelum Fintech SA, Technopôle, Sierre
Principal engineer, solution development and creation of a Predictive Power analysis tool.
2018 - 2020 (Part time)

INTERESTS

Hiking

Hiked from home (VS/CH) to Santiago de Compostella (ES)
2300 km in 83 days (April 2019 - July 2019)

Chess

Treasurer of the Union Valaisanne des Échecs (UVE-WSB)
Play with Valais 1 (League A) and Sion 1 (League B)
Ex-Captain of Chess Team Valais 2 (2nd league)