

# LEO FENG

leofeng-ca.github.io  $\diamond$  leo.feng@mila.quebec

## EDUCATION

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**Mila / Université de Montréal**

*Ph.D. in Computer Science*

Montreal, Canada

*Sep 2021 - Current*

- Fast Track from M.Sc. program
- Research Supervisor: Prof. Yoshua Bengio

**University of Oxford**

*First Class Honours, Bachelor of Arts in Computer Science*

Oxford, UK

*Oct 2017 - Jun 2020*

- Research Supervisor: Prof. Shimon Whiteson
- Represented University of Oxford in ACM International Collegiate Programming Competition (ICPC)

## RESEARCH/WORK EXPERIENCE

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**Borealis AI (Royal Bank of Canada)**

*Research Intern*

Vancouver, Canada

*Jan 2022 - Present*

- Supervised by: Dr. Mohamed O. Ahmed, Dr. Frederick Tung, and Dr. Hossein Hajimirsadeghi
- Previously supervised by: Dr. Amir Abdi
- Published 4 papers: 2x ICLR 2023, 1x ICLR 2024, 1x ICML 2024

**Mila**

*Graduate Researcher*

Montreal, Canada

*Sep 2020 - Present*

- Supervised by: Prof. Yoshua Bengio

**University of Oxford**

*Research Intern*

Oxford, UK

*Jul 2019 - Oct 2019*

- Supervised by: Prof. Shimon Whiteson and Dr. Luisa Zintgraf

**Kyoto University**

*Research Intern*

Kyoto, Japan

*Dec 2018 - Jan 2019*

- Supervised by: Prof. Atsuko Sehara-Fujisawa
- Funded by JAXA (Japan Aerospace Exploration Agency)

**Brave Software**

*Research Intern*

London, UK

*Jun 2018 - Sep 2018*

- Supervised by: Dr. Panagiotis Tigas

## PREPRINTS

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[**Preprint**] **L. Feng**, H. Hajimirsadeghi, F. Tung, M. Ahmed, Y. Bengio, and G. Mori. Attention as an RNN. *Under Submission at Neural Information Processing Systems (NeurIPS)*, 2024.

## JOURNAL PUBLICATIONS

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[**JMLR**] L. Zintgraf, S. Schulze, C. Lu, **L. Feng**, M. Igl, K. Shiarlis, Y. Gal, K. Hofmann, and S. Whiteson. VariBAD: Variational Bayes-Adaptive Deep RL via Meta-Learning. *Journal of Machine Learning Research (JMLR)*, 2021.

## CONFERENCE PUBLICATIONS

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[**ICML 2024**] **L. Feng**, F. Tung, H. Hajimirsadeghi, Y. Bengio, and M. Ahmed. Memory Efficient Neural Processes via Constant Memory Attention Block. *International Conference on Machine Learning (ICML)*, 2024.

[**ICLR 2024**] **L. Feng**, F. Tung, H. Hajimirsadeghi, Y. Bengio, and M. Ahmed. Tree Cross Attention. *International Conference on Learning Representations (ICLR)*, 2024.

[**ICLR 2023**] **L. Feng**, H. Hajimirsadeghi, Y. Bengio, and M. Ahmed. Latent Bottlenecked Attentive Neural Processes. *International Conference on Learning Representations (ICLR)*, 2023.

[**ICLR 2023**] **L. Feng**, M. Ahmed, H. Hajimirsadeghi, and A. Abdi. Towards Better Selective Classification. *International Conference on Learning Representations (ICLR)*, 2023.

[**ICLR 2022**] T. Deleu, D. Kanaa, **L. Feng**, G. Kerg, Y. Bengio, G. Lajoie, and P. Bacon. Continuous-Time Meta-Learning with Forward Mode Differentiation. *International Conference on Learning Representations (ICLR)*, **Spotlight Presentation**, 2022.

[**ICML 2021**] L. Zintgraf, **L. Feng**, C. Lu, M. Igl, K. Hartikainen, K. Hofmann, and S. Whiteson. Exploration in Approximate Hyper-State Space for Meta Reinforcement Learning. *International Conference on Machine Learning (ICML)*, 2021.

## WORKSHOP PUBLICATIONS

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[**ICML Workshop 2023**] **L. Feng**, F. Tung, H. Hajimirsadeghi, Y. Bengio, and M. Ahmed. Constant Memory Attention Block. *ICML Workshop on Efficient Systems for Foundation Models*, 2023.

[**NeurIPS Workshop 2022**] **L. Feng**, H. Hajimirsadeghi, Y. Bengio, and M. Ahmed. Efficient Queries Transformer Neural Processes. *NeurIPS Workshop on Meta-Learning*, 2022.

[**NeurIPS Workshop 2022**] **L. Feng**, P. Nouri, A. Muni, Y. Bengio, and P. Bacon. Designing Biological Sequences via Meta-Reinforcement Learning and Bayesian Optimization. *NeurIPS Workshop on Machine Learning in Structural Biology*, 2022.

[**ICLR Workshop 2020**] L. Zintgraf, **L. Feng**, M. Igl, K. Hartikainen, K. Hofmann, and S. Whiteson. Exploration in approximate hyper-state space. *ICLR Workshop on Beyond “Tabula Rasa” in Reinforcement Learning*, 2020.

[**NeurIPS Workshop 2019**] **L. Feng**, L. Zintgraf, B. Peng, and S. Whiteson. Viable: fast adaptation via backpropagating learned loss. *NeurIPS Workshop on Meta-Learning*, 2019.

## TEACHING EXPERIENCE

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**Teaching Assistant**, (Graduate course) IFT6135: Representation Learning, Université de Montréal, Canada, Fall 2021

**Teaching Assistant**, (Graduate course) IFT6390: Fundamentals of Machine Learning, Université de Montréal, Canada, Fall 2021

**Teaching Assistant**, (Undergraduate course) IFT3395: Fondements de l’Apprentissage Machine, Université de Montréal, Canada, Fall 2021

**Teaching Assistant**, IVADO/Mila Deep Learning School, Mila, Canada, Summer 2021

**Teaching Assistant**, (Undergraduate course) Design and Analysis of Algorithms, University of Oxford, UK, Hilary Term 2020

**Teaching Assistant**, (Undergraduate course) Concurrent Programming, University of Oxford, UK, Hilary Term 2020

## REVIEWER

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NeurIPS, ICML, ICLR, AAAI (Social Impact Track)

## SELECTED AWARDS/ACHIEVEMENTS

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<b>Recipient</b> , ICML Outstanding Reviewer (Top 10%), Session Chair Invitee	2022
<b>Recipient</b> , FRQNT Doctoral (B2X) Scholarship (Total: \$100,000)	2022 - 2026
<b>Recipient</b> , Canada Graduate Scholarship (CGS-M) Scholarship (\$17,500)	2021
<b>Recipient</b> , UdeM Fast-Track to PhD Scholarship (\$7000)	2021
<b>2x Recipient</b> , UdeM Excellence Scholarship (Bourse d'Excellence) (Total: \$7000)	2020, 2021
<b>Recipient</b> , Molecule Discovery Fellowship (\$12,500)	2020
<b>Recipient</b> , UdeM FAS AI Scholarship (\$6500)	2020
<b>2x Bronze Medal</b> , North Western European Regionals ACM ICPC, <i>UK, Netherlands</i>	2017, 2018
<b>Bronze Medal</b> , 29th International Olympiad of Informatics (IOI), <i>Iran</i>	2017
<b>Gold Medal</b> , Canadian Computing Olympiad, <i>Canada</i>	2017
<b>1st Place</b> (Out of 1925 students), Canadian Computing Olympiad – Qualifying Round, <i>Canada</i>	2017
<b>Summer Conference Invitee</b> , 36th International Mathematics Tournament of Towns, <i>Russia</i> (Topic: Enclosing walks and image segmentation algorithms)	2015
<b>Summer Conference Invitee</b> , 35th International Mathematics Tournament of Towns, <i>Russia</i> (Declined)	2014
<b>Various Olympiads</b> , Asian Pacific Math Olympiad (2015, 2017), USA Math Olympiad (2016), Canadian Math Olympiad (2015-2017), USA Computing Olympiad (Highest Division: Platinum) (2015-2017), Canadian Computing Olympiad (2015: Silver Medal, 2016: Bronze Medal)	