

Martin Weyssow

Ph.D. Candidate at DIRO, Université de Montréal
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EDUCATION

- Université de Montréal, Canada** 09/2020 - Present
Ph.D., Computer Science
Thesis topic: Continual learning and out-of-distribution generalization for large language models of code
Advisor: Prof. Houari Sahraoui
GPA: 4.3/4.3
- University of Namur, Belgium** 2018 - 2020
MSc., Computer Science and Data Science
graduated with *magna cum laude*
- University of Namur, Belgium** 2015 - 2018
BSc., Computer Science, Minors in Mathematics
graduated with *cum laude*

EXPERIENCE

- SCIS, Singapore Management University** 10/2022 - 01/2023
PhD Visiting Researcher
- Initiated a new international collaboration between the Université de Montréal and Singapore Management University (SMU).
 - Wrote and obtained an NSERC Alliance International Catalyst Grant to fund the collaborative research project.
 - Worked at the Software Analytics Research (SOAR) lab under the supervision of Prof. David Lo.
- DIRO, Université de Montréal** 09/2019 - 09/2020
Research intern
- Initiated a new international collaboration between the University of Namur and the Université de Montréal.
 - Completed with success four advanced graduate courses at DIRO on topics related to machine learning and natural language processing.
 - Worked on my master's thesis on the application of deep learning coupled with static analysis of programs to improve code recommendation systems.
 - Defended the thesis at the University of Namur, for which I obtained a mention of excellence from the jury.
- Data & Models Workshop** 02/2020
Participant
- Participant in a workshop about the role of artificial intelligence in model-driven engineering organized at McGill's Bellairs Research Institute (<http://www.bellairs2020.ece.mcgill.ca/index.htm>).
 - Collaborated with renowned international researchers in the field of model-driven engineering.
 - Participated in the design and writing of two academic papers published in a conference workshop and a journal.

SCHOLARSHIPS & GRANTS

- Canada NSERC Alliance International Catalyst Grant CA\$25,000
FRQ Merit Scholarship for Foreign Students (PBEEE) 05/2022 - 09/2024
Google Scholarship for Excellence, DIRO 05/2021 - 05/2022
Scholarship for Excellence, DIRO 2021
Scholarship for Excellence, DIRO 2020
Research Scholarship, Mitacs Globalink Canada 01-05/2020

COMMUNITY SERVICES

IEEE/ACM ASE Conference – <i>Reviewer</i>	2022
ICLR 2022, DL4C Workshop – <i>Program Committee</i>	2022
SOSYM Journal AI-MDE Theme Issue – <i>Reviewer</i>	2021
IEEE SANER Conference – <i>Reviewer</i>	2021
ACM/IEEE MODELS Conference – <i>Student Volunteer</i>	2020
IEEE Transactions on Software Engineering – <i>Reviewer</i>	2020

STUDENTS

Aton Kamanda, MSc. at Université de Montréal <i>Neural interfaces for deep neural networks</i>	09/2021 -
Lucas Maes, MSc. at Université de Montréal <i>Self-supervised learning for code representation learning</i>	09/2021 -
Bastien Nicolas, MSc. at University of Namur <i>Learning from Code Flow Dependencies using Graph Neural Networks for Code</i>	01-06/2021

PUBLICATIONS

- M. Weyssow**, X. Zhou, K. Kim, D. Lo, & H. Sahraoui (2023)
No More In-Context Learning? Exploring Parameter-Efficient Fine-Tuning Techniques for Code Generation with Large Language Models
under revision
- M. Weyssow**, X. Zhou, K. Kim, D. Lo, & H. Sahraoui (2023)
On the Usage of Continual Learning for Out-of-Distribution Generalization in Pre-trained Languages Models of Code
The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2023)
- J. A. H. López *, **M. Weyssow** *, J. S. Cuadrado, & H. Sahraoui (2023)
Assessing Syntax Understanding of Pre-trained Language Models of Code through Multilingual Probing
*equal contributions
under review
- J. A. H. López *, **M. Weyssow** *, J. S. Cuadrado, & H. Sahraoui (2022)
AST-Probe: Recovering abstract syntax trees from hidden representations of pre-trained language models
*equal contributions
37th IEEE/ACM International Conference on Automated Software Engineering (ASE 2022)
- M. Weyssow**, H. Sahraoui & B. Liu (2022)
Better Modeling the Programming World with Code Concept Graphs-augmented Multi-modal Learning
44th IEEE International Conference on Software Engineering, New Ideas and Emerging Results (ICSE-NIER 2022)
- M. Weyssow**, H. Sahraoui & E. Syriani (2021)
Recommending Metamodel Concepts during Modeling Activities with Pre-Trained Language Models
Software and Systems Modeling, theme issue on AI-enhanced Model-Driven Engineering
- Mussbacher, G., Combemale, B., Kienzle, J. et al. (2020)
Opportunities in intelligent modeling assistance
Software and Systems Modeling
- M. Weyssow**, H. Sahraoui, B. Vanderose & B. Frénay (2020)
Combining Code Embedding with Static Analysis for Function-Call Completion
arXiv preprint arXiv:2008.03731

G. Mussbacher, B. Combemale, S. Abrahão, N. Bencomo, L. Burgueño, G. Engels, J. Kienzle, T. Kühn, S. Mosser, H. Sahraoui, **M. Weysow** (2020)
Towards an Assessment Grid for Intelligent Modeling Assistance
2nd Workshop on Artificial Intelligence and Model-driven Engineering