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: Multimodal and continual learning for code representation learning
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 a 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 renown 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 – *Reviewer* *2022*
ICLR 2022, DL4C Workshop – *Program Committee* *2022*
SOSYM Journal AI-MDE Theme Issue – *Reviewer* *2021*
IEEE SANER Conference – *Reviewer* *2021*
ACM/IEEE MODELS Conference – *Student Volunteer* *2020*
IEEE Transactions on Software Engineering – *Reviewer* *2020*

STUDENTS

Aton Kamanda, MSc. at Université de Montréal *09/2021 -*
Deep learning for code
Lucas Maes, MSc. at Université de Montréal *09/2021 -*
Deep learning for code
Bastien Nicolas, MSc. at University of Namur *01-06/2021*
Learning from Code Flow Dependencies using Graph Neural Networks for Code

PUBLICATIONS

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. Weyssow** (2020)
Towards an Assessment Grid for Intelligent Modeling Assistance.
2nd Workshop on Artificial Intelligence and Model-driven Engineering