BEN SGHAIER OUSSAMA
PhD student at the University of Montreal

I am a PhD student at the University of Montreal. I work with Dr. Houari Sahraoui from GEODES lab.
My research interests involve using AI techniques, specifically Deep Learning and Natural Language Processing, to automate/optimize software tasks and assist scientists/software engineers in their work.

Montreal, Canada   (438) 926-3336   oussama.ben.sghaier@iro.umontreal.ca   linkedin.com/in/oussama-ben-sghaier/

EXPERIENCE

Research project: January 2021 –
GEODES Lab, (Supervised by: Dr. Houari Sahraoui), University of Montreal, QC, Canada
- Intelligence artificielle (IA) en support des processus de développement logiciel: une
  - Artificial Intelligence in support of software development processes: a work psychology perspective.
  - Using Deep Learning models to automate the process of source code review.

Internship (Mitacs Accelerate Program):   June 2020 – January 2021
Artificial Intelligence Department, National Bank of Canada, QC, Canada
- Automation and improvement of the software development pipeline:
  - Identification of potential issues/improvements in the AI pipeline of the company.
  - Build a cartography of Machine Learning-based opportunities.

Research project: September 2019 – January 2021
GEODES Lab, (Supervised by: Dr. Houari Sahraoui), University of Montreal, QC, Canada
- Towards using Artificial Intelligence techniques to assist software specialists in their tasks
  - Quality-driven multi-objective optimization approach for metamodel refactoring.
  - Metamodel refactoring using constraint solving.
  - Cartography of AI-based opportunities to improve the Machine Learning pipeline.

Graduation Project: February 2019 – June 2019
Intelligent Software Engineering Laboratory, University of Michigan, MI, USA
- Intelligent Refactorings Documentation
  - Recommending Refactorings via Commits Message Analysis.
  - Semi-Automated Refactoring Documentation Bot.

Internship: Datarox,   June 2018 – August 2018
Datarox company, Tunisia
- LabSat Chatbot:get feedbacks from users and analyzing them with machine learning algorithms.

Academic Deep Learning project,   January 2018 – May 2018
National Institute of Applied Sciences and Technology, Tunisia
- Automatic recognition of tags from questions.

Research project,   January 2018 – May 2018
National Institute of Applied Sciences and Technology, Tunisia
- Big Data decision-making application respecting Big ETL architecture: Combining Business Intelligence and Big Data

Free-lance: October 2017 – May 2018
Efret company, Tunisia
- Mobile application for the "Efret" platform .

Internship: June – August 2017
Insight Scale company, Tunisia
- In-Memory Data Management Platform to support Real-Time promotions, advertising and up-sell of services.

Internship: June 2016 – September 2016
Intilaq company, Tunisia
- Development of a mobile app of Offers & Requests & Auctions

EDUCATION

PhD, Artificial Intelligence

2021 - , University of Montreal
Montreal, Canada.

Master dgree, Artificial Intelligence

2019 - current , University of Montreal, Montreal, Canada.

Master of Research, Information Processing and Complexity of the Living

2018 - 2019 ,National School of Engineers of Tunis (ENIT), Tunisia
Co-degree with the Master's degree in Computer Science from Paris Descartes University, Paris, France

Engineering degree, Software Engineering

2014- 2019 National Institute of Applied Sciences and   Technology, Tunisia

PUBLICATIONS

- Ben Sghaier, Oussama, Houari Sahraoui, Michalis Famelis "Metamodel Refactoring using Constraint Solving: a Quality-based Perspective." SAM 2021 - System Analysis and Modelling 2021
  https://sdl-forum.org/Events/SAM2021/acceptedpapers.htm

- Ben Sghaier, Oussama, Houari Sahraoui, Eugène Syriani "Fighting evil is not enough when refactoring metamodels: Promoting the good also matters " The 36th ACM/SIGAPP Symposium On Applied Computing 2022 – SAC 2022 (under review)

- Rebai, Soumaya, Marouane Kessentini, Vahid Alizadeh, Oussama Ben Sghaier, and Rick Kazman. "Recommending refactorings via commit message analysis." Information and Software Technology 126 (2020): 106332.
  https://www.sciencedirect.com/science/article/abs/pii/S0950584920300914

- Rebai, Soumaya, Oussama Ben Sghaier, Vahid Alizadeh, Marouane Kessentini, and Meriem Chater. "Interactive refactoring documentation bot." In 2019 19th International Working Conference on Source Code Analysis and Manipulation (SCAM), pp. 152-162. IEEE, 2019.
  https://ieeexplore.ieee.org/abstract/document/8930873

TEACHING

- Teaching assistant, Fall 2021
  IFT 2255 - Software Engineering
  http://www-ens.iro.umontreal.ca/~lafontle/ift2255

VOLUNTEERING

- Student Volunteer, MODELS, 2021.
- Student Volunteer, MODELS, 2020.

AWARDS & DISTINCTIONS

- Tunisia National Scholarship, 2019.
- Qualified for the ACPC (Arab Collegiate Programming Contest) in Egypt.
- 5th place in the national TCPC (Problem Solving contest).
- 1st prize at SecuriLight
- 3rd place at hackaton "App For Democracy".
- 2nd place at the Android Coding Party

LANGUAGES

English, French, Arabic