SIMON LUPART

Research Engineer & Scientist

📍 Amsterdam, The Netherlands @ s.c.lupart@uva.nl 📞 +33 6 15 66 49 49 in simon-lupart

*I am a **PhD Candidate** in Information Retrieval within the IRLab from the University of Amsterdam (UvA). After I graduated from my engineering school ENSIMAG, I started research in NLP/IR at Naver Labs Europe for two years, within the Search and Recommendation team. I then decided to join UvA to engage in a PhD and devote myself in full research.*

EXPERIENCE

PhD Candidate
IRLab - University of Amsterdam (UvA)
October 2023 – Today · Amsterdam

- Research on Conversational IR, sparse models, personalisation, generative models, retrieval augmentation.

Research Engineer
Naver Labs Europe (NLE)
November 2021 – June 2023 · Grenoble

- Research on Neural Information Retrieval focusing on sparse models (SPLADE) within the Search and Recommendation team.
- Studies on the robustness of neural retrievers (lexical, dense and sparse) when faced to distributions shifts.
- Exploration of adversarial techniques for neural retrievers (FGSM, PGD and Masked Adversarial Generation).

Research Intern – Master Graduation Project
Aix-Marseille University (AMU) / Naver Labs Europe (NLE)
May 2021 – October 2021 · Marseille

- Collaboration between the LIS-lab (part of AMU) and NLE on Zero-Shot classification of biomedical documents.
- Comparison of pre-trained architectures (BERT/BioBERT), and multi-tasks learning approaches using a medical thesaurus.

Engineering Intern
Safran Aircraft Engines (SAE)
June 2020 – August 2020 · Villaroche, Paris

- Integration in the Prognostics & Health Monitoring team of SAE.
- Neural network modeling of the engine oil circuit variables, to try better understand engine wear phenomena.

PUBLICATIONS (FIRST AUTHOR)

Conferences
- Lupart, Formal and Clinchant, "MS-Shift: An Analysis of MS MARCO Distribution Shifts on Neural Retrieval" Full Paper at **ECIR'23**.
- Lupart and Clinchant, "A Study on FGSM Adversarial Training for Neural Retrieval" Short Paper at **ECIR'23**.

Workshops
- Lupart, Favre, Nikoulina and Ait-Mokhtar, "Zero-Shot and Few-Shot Classification of Biomedical Articles in Context of the COVID-19 Pandemic" Workshop **SDU@AAAI22**, 2022.

EDUCATION

Erasmus Exchange Computing Dpt.
Imperial College London (ICL)
Sept. 2020 – April 2021 · London

Courses from M.S. in Artificial Intelligence:

- Machine Learning and Deep Learning
- Computer Vision, Natural Language Processing and Reinforcement Learning

Master of Engineering
ENSIMAG Computing/Math Eng. School
Sept. 2018 – July 2021 · Grenoble

Speciality 2nd year in Mathematical Modelling, Images and Simulations:

- Applied mathematics, Combinatorial optimization
- Probabilistic modelling, Advanced statistical analysis

Preparatory classes MPSI MP*
CPGE Louis Thuillier
Sept. 2016 – July 2018 · Amiens

PROGRAMMING

Python · advanced
Libraries: Pytorch, Huggingface

R, **C++**, **C**, **Java** · intermediate

LANGUAGES

English · C1 · TOEFL 102/120
German · Double Diploma Abitur
French · Native

ACTIVITIES

Bolder · 2 year
Table Tennis · 5 years
Koroho (Japanese martial art) · 3 years