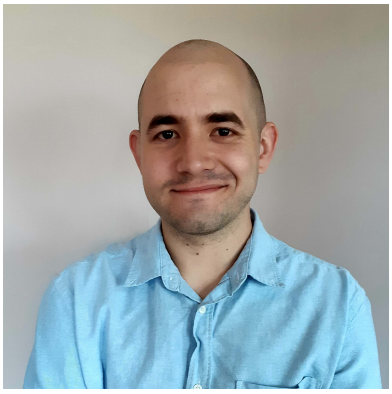

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1007 Lausanne, Switzerland

August 30, 1993

French

AREAS OF EXPERTISE

Information Retrieval

Recommender Systems

Natural Language Processing

Deep Learning

Graph Processing

Reinforcement Learning

LANGUAGES

French (Native)

English (Fluent)

ML LIBRARIES

Pytorch

Tensorflow

Deep Graph Library

Transformers

JIBRIL FREJ

Ph.D. in Computer Science

Thesis Title: Incorporation of prior knowledge for Neural Textual Information Retrieval

EXPERIENCE

Postdoctoral Researcher **2022–2024**
ML4ED, EPFL, Lausanne, Switzerland
Explainable Job-Market Oriented Course Recommendation System.
Technologies: Python, Deep Learning, Recommender System, Reinforcement Learning

Postdoctoral Researcher **2021–2022**
Inserm U1209-IAB, La Tronche, France
Using NLP, Graph Processing, and Information Retrieval for various applications in Bioinformatics.
Technologies: Python, R, BERT, GNN, Transformers, Deep Graph Library

Ph.D. **2017–2021**
Université Grenoble Alpes, LIG, Saint-Martin-d'Hères, France
Incorporation of prior knowledge in Deep Learning models for Textual Information Retrieval.
Technologies: Python, Pytorch, fastText, BERT, BM25, UMLS, DBpedia, etc.

End-of-study internship **Feb–Jul 2017**
LIG, Saint-Martin-d'Hères, France
Study and implementation of Neural Language Models for Information Retrieval
Technologies: C++, word2vec, IR Language Models

Internship **Apr–Aug 2016**
Altatech sc, Montbonnot, France
Study and implementation of machine learning algorithms for image classification with applications in default detection on silicon wafers
Technologies: C++, SVM, vl-feat

EDUCATION

Ph.D. student **2017 - 2021**
Université Grenoble Alpes
Incorporation of prior knowledge in Deep Learning models for Textual Information Retrieval.

Master Student **2015 - 2017**
UGA - IM2AG
Master of Science in Industrial and Applied Mathematics

Bachelor Student **2014 - 2015**
UJF - IM2AG
Bachelor of Mathematics and Computer Science

Stable-Baselines 3

Gymnasium

Scikit-learn

Keras

HOBBIES

CodinGame

Hiking

Cooking

Squash

Engineering School Student **2011 - 2014**
INSA Rouen
Mathematical engineering department

TEACHING

Head Teaching Assistant (≈ 600 students) **2022–2024**
EPFL, Lausanne
Advanced information, computation, communication I (CS 101)

Teaching Assistant (≈ 30 students) **2022–2023**
EPFL, Lausanne
Machine learning for behavioral data (CS 421)

Head Teaching Assistant (≈ 600 students) **2022–2023**
EPFL, Lausanne
Advanced information, computation, communication I (CS 101)

Teaching Assistant (≈ 40 students) **2017–2020**
Polytech, Grenoble
Supervision of projects and practical work in Java

Teacher (≈ 30 students) **Sep–Nov 2019**
IUT2, Grenoble
Teaching of basics of probabilities and statistics

Teaching Assistant (≈ 40 students) **Oct–Dec 2017**
Phelma, Grenoble
Supervision of practical work in C language

PUBLICATIONS

- Course Recommender Systems Need to Consider the Job Market, SIGIR 2024
  J Frej, A Dai, S Montariol, A Bosselut, T Käser
  https://arxiv.org/pdf/2404.10876
- Student Answer Forecasting: Transformer-Driven Answer Choice Prediction for Language Learning, EDM 2024
  E Grazia Gado, T Martorella, L Zunino, P Mejia-Domenzain, V Swamy, J Frej, T Käser
  https://arxiv.org/pdf/2405.20079
- GELEX: Generative AI-Hybrid System for Example-Based Learning, CHI 2024
  A Yazici, P Meija-Domenzain, J Frej, T Käser
  https://dl.acm.org/doi/abs/10.1145/3613905.3650900
- Enhancing Procedural Writing Through Personalized Example Retrieval: A Case Study on Cooking Recipes, JAIED 2024
  P Meija-Domenzain, J Frej, P Neshaei, L Mouchel, T Nazaretsky, T Wambsganss, A Bosselut, T Käser
  https://link.springer.com/article/10.1007/s40593-024-00405-1
- AI or Human? Evaluating Student Feedback Perceptions in Higher Education, ECTEL 2024
  T Nazaretsky, P Meija-Domenzain, V Swamy, J Frej, T Käser
  https://osf.io/6zm83/download

- Finding Paths for Explainable MOOC Recommendation: A Learner Perspective, LAK 2024
  J Frej, N Shah, M Kneevi, T Nazaretsky, T Käser
  https://arxiv.org/abs/2312.10082
- MultiModN-Multimodal, Multi-Task, Interpretable Modular Networks, NeurIPS 2023
  V Swamy, M Satayeva, J Frej, T Bossy, T Vogels, M Jaggi, T Käser, Mary-Anne Hartley
  https://arxiv.org/pdf/2309.14118.pdf
- Ripple: Concept-based interpretation for raw time series models in education, AAAI 2023
  M Asadi, V Swamy, J Frej, J Vignoud, M Marras, T Käser
  https://arxiv.org/abs/2212.01133
- Learning Term Discrimination, SIGIR 2020
  J. Frej, P. Mulhem, D. Schwab, J.P Chevallet
  https://hal.archives-ouvertes.fr/hal-03024756/document
- Knowledge Based Transformer Model for Information Retrieval, CIRCLE 2020
  J. Frej, P. Mulhem, D. Schwab, J.P Chevallet
  https://www.irit.fr/CIRCLE/wp-content/uploads/2020/06/CIRCLE20_05.pdf
- MLWIKIR: A Python toolkit for building large-scale Wikipedia-based Information Retrieval Datasets in Chinese, English, French, Italian, Japanese, Spanish and more, CIRCLE 2020
  J. Frej, P. Mulhem, D. Schwab, J.P Chevallet
  https://www.irit.fr/CIRCLE/wp-content/uploads/2020/06/CIRCLE20_22.pdf
- FlauBERT : des modèles de langue contextualisés pré-entraînés pour le français, JEP-TALN-RECITAL-2020
  H. Le, L. Vial, J. Frej, V. Segonne, M. Coavoux, B. Lecouteux, A. Allauzen, B. Crabbé, L. Besacier et D. Schwab.
  https://hal.archives-ouvertes.fr/hal-02784776
- WIKIR: A Python toolkit for building a large-scale Wikipedia-based English Information Retrieval Dataset, LREC 2020
  J. Frej, P. Mulhem, D. Schwab, J.P Chevallet
  www.lrec-conf.org/proceedings/lrec2020/pdf/2020.lrec-1.237.pdf
- Modèle Transformer à base de Connaissances pour la Recherche d'Information dans des Domaines Spécialisés, Workshop DL for NLP, EGC 2020
  J. Frej, P. Mulhem, D. Schwab, J.P Chevallet
  https://hal.archives-ouvertes.fr/hal-02474706
- FlauBERT: Unsupervised Language Model Pre-training for French, LREC 2020
  H. Le, L. Vial, J. Frej, V. Segonne, M. Coavoux, B. Lecouteux, A. Allauzen, B. Crabbé, L. Besacier et D. Schwab.
  https://www.aclweb.org/anthology/2020.lrec-1.302.pdf
- Combining Subword information and Language model for Information Retrieval, CORIA 2018
  J. Frej, P. Mulhem, D. Schwab, J.P Chevallet
  https://hal.archives-ouvertes.fr/hal-01781181
- Enhancing Translation Language Models with Word Embedding for Information Retrieval, Workshop RISE 2017, IC 2017
  J. Frej, P. Mulhem, D. Schwab, J.P Chevallet
  https://hal.archives-ouvertes.fr/hal-01681311