Lila BOUALILI

PH.D. IN NATURAL LANGUAGE PROCESSING AND INFORMATION RETRIEVAL

Ile-de-France, France

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Education

IRIT Laboratory, University of Paul Sabatier   *Toulouse, France*

PH.D. IN COMPUTER SCIENCE   *2019 - 2022*

- Thesis Topic: Deep Learning for Information retrieval
- Advisors: Jose G.Moreno, Mohand Boughanem
- Area of study: Deep Learning, Information Retrieval, and Natural Language Processing

Higher National School of Computer Science (ESI)   *Algiers, Algeria*

MASTER'S DEGREE IN COMPUTER SCIENCE AND ENGINEERING   *2018 - 2019*

- Thesis Topic: Real Time Tweet Summarization
- Advisors: Lynda Said Lhadj, Mohand Boughanem
- Area of study: Deep Learning, Information Retrieval, and Natural Language Processing

Higher National School of Computer Science (ESI)   *Algiers, Algeria*

ENGINEERING DEGREE IN COMPUTER SCIENCE AND ENGINEERING (VALEDICTORIAN)   *2014 - 2019*

- Majored in Information Systems & Software

Experience

Ooredoo   *Algiers, Algeria*

ENGINEER INTERNSHIP   *Jun. 2017 - Sep. 2017*

- Participated in the design and configuration of a micro-service architecture

LIG, University of Grenoble Alps   *Grenoble, France*

POSTDOC RESEARCH FELLOWSHIP   *dec. 2022 - present*

- Enhancing the systematic generalization capabilities of sequence-to-sequence models by integrating structural (syntactic) information into the decoding process via hyperbolic representations of dependency trees.

Teaching Activities

University of Paul Sabatier   *Toulouse, France*

IN FRENCH.   *2019 - 2021*

- Data Structures and Fundamental Algorithms (Semester I)
- Database Programming and administration (Semester II)

Research Internships

Institut de Recherche en Informatique de Toulouse (IRIT)   *Toulouse, France*

RESEARCH ON MICROBLOG RETRIEVAL AND SUMMARIZATION   *Dec. 2018 - Jul. 2019*

- Advisor: Mohand Boughanem
- Development of a tweet summarization approach based on Deep Learning Models. Manipulation of various state-of-the-art Models for both tweet representation and relevance estimation of tweets with respect to users' interests.

Max Planck Institute for Informatics (MPI)   *Saarbrücken, Germany*

A STUDY OF TERM-TOPIC EMBEDDINGS   *Jun. 2021 - Feb. 2022*

- Advisor: Andrew Yates
- Investigating the distillation of Transformer produced contextualized representations into more explicit and principled contextualization process based on aggregating a finite set of static term-topic embeddings representing the different contextual topics of tokens.

Publications

- Lila Boualili
  Deep learning for information retrieval: studying relevant signals for ad hoc search based on transformer models
  Thesis, Université Paul Sabatier-Toulouse III
- Lila Boualili and Andrew Yates
  A Study of Term-Topic Embeddings for Ranking
  Advances in Information Retrieval: 45th European Conference on Information Retrieval, ECIR 2023, Dublin, Ireland, April 2–6, 2023, Proceedings, Part II
- Lila Boualili, Jose G. Moreno, and Mohand Boughanem
  Highlighting Exact Matching via Marking Strategies for Ad hoc Document Ranking with Pretrained Contextualized Language Models
  Information Retrieval Journal 25 (4), 414-460
- Lila Boualili, Jose G. Moreno, and Mohand Boughanem
  MarkedBERT: Integrating Traditional IR Cues in Pre-trained Language Models for Passage Retrieval
  Proceedings of the 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR '20), X'ian, China, July 25-30, 2020.
- Lila Boualili, Lynda Said Lhadj, and Mohand Boughanem
  Retrospective Tweet Summarization: Investigating Neural Approaches for Tweet Retrieval
  Proceedings of the Joint Conference of the Information Retrieval Communities in Europe (CIRCLE 2020), Samatan, Gers, France, July 6-9, 2020.

Scholarships

2020	**SIGIR Student Travel Grant,** attend SIGIR'20 virtual conference	*X'ian, China*
2019	**CIMI Excellency Doctoral scholarship,** three years PhD full scholarship	*Toulouse, France*
2019	**IRIT Travel Support Scholarship,** Attend ESSIR'19 Summer School	*Milan, Italy*
2019	**IRIT Internship Support Scholarship,** Six months Research Internship	*Toulouse, France*

Student Activities

2019	**Student Volunteer,** SIGIR'19 Conference	*Paris, France*
2019	**Summer School,** European Summer School for Information Retrieval (ESSIR'19)	*Milan, Italy*
2019	**Student Program,** Microsoft Student Partner	*Algiers, Algeria*
2018	**Student Volunteer,** Microsoft HourOFCode	*Algiers, Algeria*
2018	**Student Volunteer,** College Office 365 and IT Academy administrator	*Algiers, Algeria*

Skills

Programming	Python, C, JAVA, Ada, JavaScript and PL/SQL
Libraries	Pytorch, TensorFlow, Sickit-learn, Transformers, Sentence-Transformers, Faiss, fairseq
Database	Oracle and MySQL
Operating Systems	Microsoft Windows, Linux and other UNIX variants
Agile Methodologies	Scrum and Kanban
Languages	French (native), English (professional), Arabic (professional), Kabyle (native)

Hobbies

Photography, Hiking, Reading, Drawing