

# Hanna Abi Akl

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Paris, 75005, France

## SUMMARY

I am a PhD student in logic, language and computation at INRIA. My research interests include neuro-symbolic artificial intelligence, knowledge representation, knowledge graphs, ontologies, natural language processing and the semantic web. I am currently working on neuro-symbolic and knowledge-based approaches for reasoning abilities in Large Language Models. I also teach at Data ScienceTech Institute and Sciences Po.

## PROFESSIONAL EXPERIENCE

- **SciencesPo Paris School of International Affairs**  08/2024 - Current  
*Adjunct Instructor* Paris, France
  - Teaching activities: Programming, Databases, and Machine Learning Foundations for Decision-Makers, Cloud Computing
- **INRIA**  02/2023 - Current  
*External Scientific Collaborator* Nice, France
  - Member of the WIMMICS team
  - PhD thesis supervision on triplet relation extraction using NLP and Semantic Web methodologies
  - Testing and validation of the KGStat tutorial project based on Machine Learning techniques using Semantic Web data
- **Data ScienceTech Institute School of Engineering**  02/2023 - Current  
*Vice-Dean and Chief Academic Officer* Paris, France
  - Teaching activities: Clean IT, Software Engineering, Machine Learning Labs, Artificial Neural Networks, Deep Learning, Amazon Web Services, Data Wrangling with SQL
  - Preparation of Faculty Seminars and scientific programme reviews
  - Improvement of programme structure and evaluation (Bachelors and Masters level)
  - Responsible for faculty recruitment interviews
- **Yseop**  04/2019 - 02/2023  
*Data Scientist and Machine Learning Engineer* Paris, France
  - Identification and prototyping of artificial intelligence use cases using machine and deep learning techniques
  - Design and integration of artificial intelligence tools in existing product from text corpora, APIs, business ontologies and knowledge graphs
- **Data ScienceTech Institute School of Engineering**  09/2021 - 02/2023  
*Course Instructor* Paris, France
  - Teaching activities: Clean IT, Software Engineering, Machine Learning Labs
- **Data ScienceTech Institute School of Engineering**  01/2019 - 04/2019  
*Private Tutor* Paris, France
  - Preparing students for the "AWS Certified Solutions Architect - Associate" certification exam
- **Data Consult**  06/2015 - 08/2018  
*Data Integration Engineer* Beirut, Lebanon
  - Configuration, maintenance and customization of cloud applications
  - High-level analysis and smart data reporting through API and chatbot software integration
  - Implementation of first Smart City solution in Lebanon
  - Presentation of data augmentation platform at the Mobile World Congress (MWC)
- **Touch**  07/2014 - 08/2014  
*Site Implementation and Maintenance (SI&M) Engineering Intern* Beirut, Lebanon
  - Theoretical research on the development and advancement of 4G technology
- **American University of Beirut**  06/2012 - 12/2013  
*Research Assistant* Beirut, Lebanon
  - Benchmarking and optimization of Alaoui filter and integrator model parameters in Matlab
- **American University of Beirut**  09/2011 - 09/2015  
*Private Tutor* Beirut, Lebanon
  - Teaching middle school and high school subjects

## EDUCATION

- **INRIA - Université Côte d'Azur** 01/2025 - Current  
*PhD, Computer Science* Nice, France
  - Topic: Neuro-symbolic and knowledge-based approaches for reasoning in Large Language Models
  - Supervision: Fabien Gandon, Catherine Faron, Pierre Monnin
  - Keywords: Logical Reasoning, Neuro-symbolic Artificial Intelligence, Knowledge Graphs, Ontologies, Natural Language Processing, Semantic Web
  - Summer Schools: ESSAI 2025, Reasoning Web 2025
- **Quantic School of Business and Technology** 12/2024 - 06/2026  
*Executive MBA* Washington, DC, United States of America
  - GPA: 4.0/4.0
  - Awarded the France Leadership scholarship
- **Université Côte d'Azur** 12/2023 - 07/2024  
*Master, Computer Science* Nice, France
  - GPA: 4.0/4.0
  - Awarded full completion by the Validation d'Acquis par Expérience (VAE)
- **Data ScienceTech Institute School of Engineering** 10/2018 - 09/2019  
*M.Sc., Data Science and Artificial Intelligence* Paris, France
  - GPA: 4.0/4.0
  - Graduated Summa Cum Laude
  - Awarded Second prize at HackBordeaux 2019 Capgemini challenge for the FuelMi application
- **American University of Beirut** 09/2011 - 05/2015  
*B.E., Computer and Communications Engineering* Beirut, Lebanon
  - Dean's Honor List: Spring Semester 2015
  - Awarded Second prize in the National Instruments elevator design challenge
  - Recipient of the Philippe Jabre Association scholarship for excellence
- **Collège Notre Dame de Jamhour** 09/1998 - 06/2011  
*High School Diploma, General Sciences* Beirut, Lebanon
  - Ranked in top 10% of cohort (300 students)
  - High Distinction in the French Baccalaureate
  - High Distinction in the Lebanese Baccalaureate
  - Recipient of the Carlos Ghosn scholarship for excellence

## PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS











- [S.1] **Hanna Abi Akl, et al (2025). Investigating Language Model Capabilities to Represent and Process Formal Knowledge: A Preliminary Study to Assist Ontology Engineering.** Manuscript submitted for publication in *Declarative AI 2025 Doctoral Consortium*.
- [C.17] Célian Ringwald, Fabien Gandon, Catherine Faron, Franck Michel, **Hanna Abi Akl (2025). Kastor: Fine-tuned Small Language Models for Shape-based Active Relation Extraction.** In *European Semantic Web Conference*, pp. 94-115. Springer, Cham. DOI: 10.1007/978-3-031-94575-5\_6.
- [P.3] **Hanna Abi Akl, Hugues de Mazancourt, Dominique Mariko (2024). Ontology mapping and adaptation systems and methods.** U.S. Patent Office, Patent No. 12,106,049. Publication Date: 01 October 2024.
- [C.16] **Hanna Abi Akl, et al (2024). Knowledge Graphs can play together: Addressing knowledge graph alignment from ontologies in the biomedical domain.** In *Proceedings of the 16th International Conference on Knowledge Discovery and Information Retrieval (KDIR 2024)*, pp. 416-423. DOI: 10.5220/0013015800003838.
- [C.15] **Hanna Abi Akl (2024). Project SHADOW: Symbolic Higher-order Associative Deductive reasoning On Wikidata using LM probing.** In *Proceedings of the 10th International Conference on Natural Language Computing (NATL 2024)*.
- [C.14] **Hanna Abi Akl (2024). DSTI at LLMs4OL 2024 Task A: Intrinsic versus extrinsic knowledge for type classification.** In *Open Conference Proceedings*, pp. 93-101. DOI: <https://doi.org/10.52825/ocp.v4i.2492>.
- [C.13] Célian Ringwald, Fabien Gandon, Catherine Faron, Franck Michel, **Hanna Abi Akl (2024). Learning Pattern-Based Extractors from Natural Language and Knowledge Graphs Applying Large Language Models to Wikipedia & the Linked Open Data.** In *Proceedings of the AAAI Conference on Artificial Intelligence*, pp. 23411-23412. DOI: <https://doi.org/10.1609/aaai.v38i21.30406>.
- [C.12] Célian Ringwald, Fabien Gandon, Catherine Faron, Franck Michel, **Hanna Abi Akl (2024). 12 shades of RDF: Impact of Syntaxes on Data Extraction with Language Models.** In *European Semantic Web Conference*, pp. 81-91. Springer, Cham. DOI: [https://doi.org/10.1007/978-3-031-78952-6\\_8](https://doi.org/10.1007/978-3-031-78952-6_8).







- [C.11] **Hanna Abi Akl** (2024). **NeSy is alive and well: A LLM-driven symbolic approach for better code comment data generation and classification**. In *Joint Proceedings of the ESWC 2024 Workshops and Tutorials co-located with 21th European Semantic Web Conference (ESWC 2024)*.
- [C.10] Célian Ringwald, Fabien Gandon, Catherine Faron, Franck Michel, **Hanna Abi Akl** (2024). **Well-written knowledge graphs: most effective RDF syntaxes for triple linearization in end-to-end extraction of relations from texts**. In *Proceedings of the AAAI Conference on Artificial Intelligence*, pp. 23631-23632. DOI: <https://doi.org/10.1609/aaai.v38i21.30502>.
- [C.9] **Hanna Abi Akl** (2023). **PSYCHIC: A Neuro-Symbolic Framework for Knowledge Graph Question-Answering Grounding**. In *Joint Proceedings of Scholarly QALD 2023 and SemREC 2023 co-located with 22nd International Semantic Web Conference (ISWC 2023)*.
- [C.8] **Hanna Abi Akl** (2023). **A ML-LLM pairing for better code comment classification**. In *FIRE (Forum for Information Retrieval Evaluation)*.
- [C.7] Célian Ringwald, Fabien Gandon, Catherine Faron, Franck Michel, **Hanna Abi Akl** (2023). **Learning RDF pattern extractors from natural language and knowledge graphs-application to Wikipedia and the LOD**. In *Proceedings of the AAAI Conference on Artificial Intelligence*. DOI: <https://doi.org/10.1609/aaai.v38i21.30406>.
- [P.2] **Hanna Abi Akl**, Hugues de Mazancourt, Dominique Mariko, Valentin Pierart (2023). **Systems and methods for measuring automatability of report generation using a natural language generation system**. U.S. Patent Office, Patent No. 11,734,517. Publication Date: 22 August 2023.
- [C.6] **Hanna Abi Akl** (2023). **The Path to Autonomous Learners**. In *Science and Information Conference*, pp. 808-830. DOI: [https://doi.org/10.1007/978-3-031-37717-4\\_52](https://doi.org/10.1007/978-3-031-37717-4_52).
- [P.1] Dominique Mariko, **Hanna Abi Akl**, Hugues de Mazancourt (2022). **Techniques for generating natural language text customized to linguistic preferences of a user**. U.S. Patent Office, Patent No. 11,501,088. Publication Date: 15 November 2022.
- [J.3] Rami Bou Khalil, Ramez Dagher, Myriam Zarzour, Ghassan Sleilaty, **Hanna Abi Akl**, et al (2022). **The impact of lockdown and other stressors during the COVID-19 pandemic on depression and anxiety in a Lebanese opportunistic sample: an online cross-sectional survey**. In *Current Psychology*, pp. 1-11. DOI: <https://doi.org/10.1007/s12144-021-02644-0>.
- [C.5] **Hanna Abi Akl**, et al (2021). **Yseop at FinSim-3 Shared Task 2021: Specializing Financial Domain Learning with Phrase Representations**. In *Proceedings of the Third Workshop on Financial Technology and Natural Language Processing*, pp. 52-57.
- [C.4] Anubhav Gupta, **Hanna Abi Akl**, et al (2021). **Not all titles are created equal: Financial document structure extraction shared task**. In *Proceedings of the 3rd Financial Narrative Processing Workshop*, pp. 86-88.
- [C.3] **Hanna Abi Akl**, et al (2020). **Yseop at SemEval-2020 Task 5: Cascaded BERT Language Model for Counterfactual Statement Analysis**. In *Proceedings of the Fourteenth Workshop on Semantic Evaluation*, pp. 468-478.
- [J.2] **Hanna Abi Akl**, et al (2020). **SemEval-2020 Task 5: Detecting Counterfactuals by Disambiguation**. In *arXiv preprint arXiv:2005.08519*.
- [J.1] Dominique Mariko, Estelle Labidurie, Yagmur Ozturk, **Hanna Abi Akl**, et al (2020). **Data Processing and Annotation Schemes for FinCausal Shared Task**. In *arXiv preprint arXiv:2012.02498*.
- [C.2] Dominique Mariko, **Hanna Abi Akl**, et al (2020). **Financial Document Causality Detection Shared Task (FinCausal 2020)**. In *Proceedings of the 1st Joint Workshop on Financial Narrative Processing and MultiLing Financial Summarisation*, pp. 23-32.
- [C.1] **Hanna Abi Akl**, Anubhav Gupta, Dominique Mariko (2019). **Fintoc-2019 shared task: Finding title in text blocks**. In *Proceedings of the Second Financial Narrative Processing Workshop (FNP 2019)*, pp. 58-62.

## PROJECTS

D=DATA, P=PROJECT, S=SOFTWARE



- [S.9] **SHADOW: LM-probing model for triple completion on Wikidata** 2024  
*Tools: Python, SPARQL, Wikidata, Knowledge Graphs, Deep Learning, Hugging Face* [🔗]
  - Fine-tuned model on data
  - Publicly released on Hugging Face
- [S.8] **FLAN-T5 small-WordNet: WordNet term classification with Wikidata semantic information** 2024  
*Tools: Python, SPARQL, Wikidata, Knowledge Graphs, Deep Learning, Hugging Face* [🔗]
  - Extracted Wikidata semantic information
  - Created semantic embedding vectors
  - Fine-tuned model on data
  - Publicly released on Hugging Face

<ul style="list-style-type: none"> <li>• <b>[S.7] FLAN-T5 small-GeoNames: GeoNames term classification with Wikidata semantic information</b>  <i>Tools: Python, SPARQL, Wikidata, Knowledge Graphs, Deep Learning, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Extracted Wikidata semantic information</li> <li>◦ Created semantic embedding vectors</li> <li>◦ Fine-tuned model on data</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2024 
<ul style="list-style-type: none"> <li>• <b>[D.5] WordNet Semantic Primes: Enriching WordNet data with Wikidata</b>  <i>Tools: Python, SPARQL, MongoDB, Wikidata, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Created scripts to query Wikidata Knowledge Graph information</li> <li>◦ Vectorized Knowledge Graph information</li> <li>◦ Configured MongoDB to store and index vectors</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2024 
<ul style="list-style-type: none"> <li>• <b>[D.4] GeoNames Semantic Primes: Enriching GeoNames data with Wikidata</b>  <i>Tools: Python, SPARQL, MongoDB, Wikidata, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Created scripts to query Wikidata Knowledge Graph information</li> <li>◦ Vectorized Knowledge Graph information</li> <li>◦ Configured MongoDB to store and index vectors</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2024 
<ul style="list-style-type: none"> <li>• <b>[P.5] KGstat: Knowledge Graph querying and machine learning modeling on data</b>  <i>Tools: Python, R, SPARQL, Knowledge Graphs, Machine Learning</i> <ul style="list-style-type: none"> <li>◦ Applied statistical analysis for classification and regression cases on Knowledge Graph data</li> <li>◦ Proposed machine learning models for improving classification and regression performance</li> <li>◦ Evaluated used metrics for classification and regression</li> </ul> </li> </ul>	2023 
<ul style="list-style-type: none"> <li>• <b>[S.6] PSYCHIC: Question-answering neuro-symbolic model on knowledge graphs with SPARQL</b>  <i>Tools: Python, SPARQL, Knowledge Graphs, Deep Learning, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Fine-tuned model on data</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2023 
<ul style="list-style-type: none"> <li>• <b>[S.5] Text Smoothing: Generative model for financial text rewriting</b>  <i>Tools: Python, Deep Learning, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Created scripts for scraping and cleaning data pipeline</li> <li>◦ Tested model zero-shot configurations</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2022 
<ul style="list-style-type: none"> <li>• <b>[S.4] Complete FNP T5 Data2Text: Complete T5-base data to text model specialized for finance NLG</b>  <i>Tools: Python, Deep Learning, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Created scripts for scraping and cleaning data pipeline</li> <li>◦ Re-trained model on data</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2022 
<ul style="list-style-type: none"> <li>• <b>[S.3] Simple FNP T5 Data2Text: Simple T5-base data to text model specialized for finance NLG</b>  <i>Tools: Python, Deep Learning, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Created scripts for scraping and cleaning data pipeline</li> <li>◦ Fine-tuned model on data</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2022 
<ul style="list-style-type: none"> <li>• <b>[D.3] FNP 2022 FinCausal: Data set for the FinCausal 2022 shared task</b>  <i>Tools: Python</i> <ul style="list-style-type: none"> <li>◦ Performed data curation</li> <li>◦ Participated in inter-annotator agreement sessions</li> <li>◦ Created baseline models and scoring scripts</li> </ul> </li> </ul>	2022 
<ul style="list-style-type: none"> <li>• <b>[S.2] FinISH: Financial term classification model for domain ontology classes</b>  <i>Tools: Python, Ontologies, Deep Learning, Hugging Face</i> <ul style="list-style-type: none"> <li>◦ Created scripts for scraping and cleaning FIBO ontology</li> <li>◦ Augmented financial ontology terms with definitions</li> <li>◦ Fine-tuned model on data</li> <li>◦ Publicly released on Hugging Face</li> </ul> </li> </ul>	2021 
<ul style="list-style-type: none"> <li>• <b>[S.1] Financial Relation Extraction: Classification model for type of relations in financial sentences</b>  <i>Tools: Python, Deep Learning, Hugging Face</i> </li> </ul>	2021 



- Created scripts for scraping and cleaning financial data pipeline
- Extracted and normalized financial relations
- Fine-tuned model on data
- Publicly released on Hugging Face
- **[D.2] FNP 2021 FinCausal: Data set for the FinCausal 2021 shared task** 2021  
*Tools: Python* 
  - Performed data curation
  - Participated in inter-annotator agreement sessions
  - Created baseline models and scoring scripts
- **[D.1] FNP 2020 FinCausal: Data set for the FinCausal 2020 shared task** 2020  
*Tools: Python* 
  - Performed data curation
  - Participated in inter-annotator agreement sessions
  - Created baseline models and scoring scripts
- **[P.4] FuelMi: The pet that takes care of you** 2019  
*Tools: Python* 
  - Designed application concept and intent
  - Implemented Python back-end functionalities for health and activity management
  - Pitched in front of live jury
- **[P.3] Lebanon Smart City Experience: First smart city in Lebanon at BeitMisk** 2017  
*Tools: Air Quality Sensors, Node-Red, PHP, MySQL, HTML5, MQTT Protocol, Server-Side JavaScript* 
  - Maintained and queried sensor log data in MySQL database
  - Created PHP query scripts to provide data insights for monitoring dashboard
  - Updated HTML5 dashboard with insights on consumption tracking
  - Developed custom Facebook chatbot with Node-Red and Watson NLP toolkit
- **[P.2] Ticketing System: Customizing Service Delivery** 2016  
*Tools: Oracle RightNow Service Cloud, PHP, HTML5, CSS, JavaScript, ROQL, Google Scripts, Google Sheets* 
  - Implemented and configured ticketing system
  - Managed user access and administration
  - Created custom workflows for internal use
  - Created and enabled custom views and reports
  - Managed and customized web portal with HTML5, CSS and JavaScript
  - Created custom project management time sheet with Google Sheets back-end and Google Scripts
  - Maintained PHP scripts for updated ROQL real-time queries and ticket views
- **[P.1] Sales CRM System: Improving Customer Relationship Management Experience** 2016  
*Tools: Oracle Sales Cloud, Groovy scripting, Microsoft Dynamics* 
  - Performed migration from Microsoft Dynamics to Oracle Sales Cloud
  - Created custom views for users
  - Managed user access and administration
  - Setup Single sign-on (SSO) with LDAP between Microsoft Active Directory and Oracle
  - Created custom workflows and scripts for internal behavior

## SUPERVISION

M=M.Sc., P=PhD

- **[M.3] Claire Davat, Albin Brogialdi, Marius Akre, Florian Irrien, Luc Sagnes** 11/2024 - 04/2025  
*Data ScienceTech Institute School of Engineering* 
  - Supervised DIRISI Hackathon project: "L'Intelligence Artificielle au cœur des réseaux"
  - Ranked Second in the challenge
- **[M.2] Jannic Cutura** 06/2023 - 11/2023  
*Data ScienceTech Institute School of Engineering* 
  - Supervised "Deep Learning" research project: Breaking the U: Asymmetric U-Net for Object Recognition in Muon Tomography
  - Ranked Fourth in the IEEE BigData 2023 Cup: Object Recognition with Muon Tomography using Cosmic Rays challenge
  - Paper publication in IEEE Conference Proceedings



- **[P.1] Célian Ringwald** 12/2022 - Current  
*Université Côte d'Azur, Inria, CNRS, I3S*   
◦ Supervised PhD thesis "Learning RDF pattern extractors for a language from dual Wikipedia/LOD databases"
- **[M.1] Jannic Cutura** 12/2022 - 04/2023  
*Data ScienceTech Institute School of Engineering*   
◦ Supervised "Python Machine Learning Labs" research project: Web Intelligence - Deduplication challenge  
◦ Ranked First (reproducibility) and Second (accuracy) in the EuropeanStatisticsAwards challenge  
◦ Prize money: 14,000 euros

## SKILLS

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- **Programming Languages:** Python, C, C++, Java, JavaScript, PHP, HTML5, CSS3
- **Web Technologies:** RDF, RDFS, OWL, SPARQL
- **Database Systems:** Microsoft SQL Server, MySQL, PostgreSQL, MongoDB, Neo4j
- **Data Science & Machine Learning:** Classification, Regression, Clustering, Reinforcement Learning
- **Cloud Technologies:** Amazon Web Services
- **DevOps & Version Control:** Git, SVN
- **Specialized Area:** Natural Language Processing, Knowledge Graphs, Computational Linguistics
- **Mathematical & Statistical Tools:** Matlab, Latex
- **Other Tools & Technologies:** Docker, Windows, Linux (bash scripting)
- **Project Management:** Agile methods (Scrum), Test-Driven Development





















## HONORS AND AWARDS

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- **Second Place in the LLMs4OL challenge** 2024  
*International Semantic Web Conference (ISWC)*   
◦ Second in F1 score (97.16%) in SubTask A.1 (FS) - Term Typing - Wordnet
- **Third Place in the Scholarly-QALD challenge** 2023  
*International Semantic Web Conference (ISWC)*   
◦ Third in F1 score (71.00%) in DBLP-QuAD Entity Linking
- **Second Place in the IRSE shared task** 2023  
*FIRE: Forum for Information Retrieval Evaluation*   
◦ Second in F1 score increase (+1.5%)
- **Company Core Values Award Q3 Trust** 2022  
*Yseop*   
◦ Chosen by colleagues (80 employees)
- **Second place in the FinSim-3 shared task** 2021  
*FinNLP*   
◦ Second in Mean Rank (1.141) and Accuracy (91.70%) scores
- **Company Core Values Award Q1 Innovation** 2021  
*Yseop*   
◦ Chosen by colleagues (80 employees)
- **Second Place in the HackBordeaux Capgemini challenge** 2019  
*Enseirb - Matmeca*   
◦ Second for the FuelMi health application
- **Second Place in the National Instruments Elevator Competition** 2011  
*American University of Beirut*   
◦ Second in the Elevator Competition design challenge
- **Finalist in the International College School Poetry Competition** 2010  
*International College*   
◦ Finalist among 300 national participants
- **Recipient of the "Philippe Jabre Foundation Scholarship for Excelling Students"** 2011-2015  
*American University of Beirut*   
◦ Recipient for academic excellence
- **Recipient of the "Carlos Ghosn Foundation Scholarship for Excelling Students"** 1997-2011  
*Collège Notre Dame de Jamhour*   
◦ Recipient for academic excellence



## SCIENTIFIC ACTIVITIES

C=CONFERENCE, J=JOURNAL, S=SPECIAL SESSION, T=TRACK, W=WORKSHOP

• [T.2] Industry Track at EMNLP <i>Reviewer</i>	2025 
• [J.2] Engineering Applications of Artificial Intelligence <i>Reviewer</i>	2025 
• [W.13] Assessing World Models: Methods and Metrics for Evaluating Understanding workshop at ICML <i>Reviewer</i>	2025 
• [W.12] 19th International workshop on Neural-Symbolic Learning and Reasoning (NeSy) <i>Reviewer</i>	2025 
• [W.11] Representational Alignment workshop at ICLR <i>Reviewer</i>	2025 
• [J.1] Neurosymbolic Artificial Intelligence <i>Reviewer</i>	2025 
• [C.6] 3rd World Conference on eXplainable Artificial Intelligence (XAI) <i>Programme Committee</i>	2025 
• [T.1] Industry Track at EMNLP <i>Reviewer</i>	2024 
• [W.10] NeurIPS workshop on Behavioral Machine Learning <i>Reviewer</i>	2024 
• [S.1] Harmonising Generative AI and Semantic Web Technologies at ISWC <i>Programme Committee</i>	2024 
• [W.9] Large Language Models and Cognition workshop at ICML <i>Reviewer</i>	2024 
• [C.5] 4th International Conference on NLP & Data Mining (NLDM) <i>Programme Committee</i>	2024 
• [C.4] 10th International Conference on Computer Science and Information Technology (CSTY) <i>Programme Committee</i>	2024 
• [C.3] 2nd World Conference on eXplainable Artificial Intelligence (XAI) <i>Programme Committee</i>	2024 
• [C.2] 5th International conference on Advanced Natural Language Processing (AdNLP) <i>Programme Committee</i>	2024 
• [W.8] 18th International workshop on Neural-Symbolic Learning and Reasoning (NeSy) <i>Programme Committee</i>	2024 
• [C.1] 2nd International Conference on NLP & AI (NLP AI) <i>Programme Committee</i>	2024 
• [W.7] Neuro-Symbolic Learning and Reasoning in the Era of Large Language Models workshop at AAAI <i>Reviewer</i>	2024 
• [W.6] 17th International workshop on Neural-Symbolic Learning and Reasoning (NeSy) <i>Programme Committee</i>	2023 
• [W.5] Neurosymbolic Generative Models (NeSy-GeMs) workshop at ICLR <i>Programme Committee</i>	2023 
• [W.4] 5th Financial Narrative Processing (FNP) workshop <i>Programme Committee</i>	2023 
• [W.3] FinCausal shared task at The 4th Financial Narrative Processing (FNP) workshop <i>Organizer</i>	2022 
• [W.2] FinCausal shared task at The 3rd Financial Narrative Processing (FNP) workshop <i>Organizer</i>	2021 
• [W.1] FinCausal shared task at The 2nd Financial Narrative Processing (FNP) workshop <i>Organizer</i>	2020 

## TEACHING ACTIVITIES

B=B.S., M=M.Sc.

• [M.11] Data Management <i>Data ScienceTech Institute School of Engineering</i> <ul style="list-style-type: none"><li>◦ Language: English</li><li>◦ Number of hours: 5</li><li>◦ Description: Fundamentals of information systems analysis &amp; design, functional dependency, relation model &amp; relational algebra</li></ul>	2024-2025 
• [M.10] Operating Systems and Networking <i>Data ScienceTech Institute School of Engineering</i> <ul style="list-style-type: none"><li>◦ Language: English</li><li>◦ Number of hours: 5</li></ul>	2024-2025 

- Description: Fundamentals of algorithmics and data structure design, network layers, routing & protocols, address spaces and associated service with the TCP/IP suite
- **[B.1] Relational Model and SQL** 2023-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: French  
 ◦ Number of hours: 25  
 ◦ Description: Introduction to the relational model, relational algebra operations, normal forms, database system design & SQL queries
- **[M.9] Deep Learning** 2023-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 25  
 ◦ Description: PyTorch introduction, GPU training, neural network applications (computer vision, natural language processing, reinforcement learning)
- **[M.8] Artificial Neural Networks** 2023-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 25  
 ◦ Description: Shallow & deep artificial neural networks, data representation & distributed representations, backpropagation & gradient descent, training & optimization, Python applications (Tensorflow & Keras)
- **[M.7] Amazon AWS** 2023-2024  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 50  
 ◦ Description: Introduction to cloud computing, cloud architecture, preparation for the "AWS Certified Solutions Architect – Associate" certification
- **[M.6] Data Wrangling with SQL** 2023-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 25  
 ◦ Description: Review of relational models & database management systems, advanced SQL queries, dynamic SQL, stored procedures & triggers
- **[M.5] AI Awareness** 2023-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 5  
 ◦ Description: Learning processes in living organisms and computers, AI ethics and challenges
- **[M.4] Software Engineering - Part 2** 2021-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 25  
 ◦ Description: Python object-oriented programming, overview of C++
- **[M.3] Python Machine Learning Labs** 2021-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 25  
 ◦ Description: Data structures, cleaning & preparation, Python libraries, feature engineering, machine learning algorithms, classification & regression
- **[M.2] Introduction to Data Structures & Software Engineering** 2021-2022  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 10  
 ◦ Description: Introduction to data structures, benchmarks in Python & R, introduction to data simulation
- **[M.1] Clean IT** 2021-2025  
*Data ScienceTech Institute School of Engineering*   
 ◦ Language: English  
 ◦ Number of hours: 5  
 ◦ Description: Introduction to Google Colab, Python local setup, virtual environments, IDE configuration, R & RStudio, Git & GitHub



• <b>[B.9] Game Theory</b> <i>Amazon Kindle Direct Publishing</i>	09/2024 
• <b>[A.5] The Poetryhood</b> <i>The Poetryhood</i>	2024 
• <b>[J.33] What's in a Name?</b> <i>The Paris Institute For Critical Thinking</i>	2024 
• <b>[J.32] Winter 2023/24</b> <i>The Paradox Literary Magazine</i>	2023 
• <b>[J.31] Issue 7</b> <i>Indelible Lit</i>	2023 
• <b>[J.30] Volume 1 Issue 3</b> <i>The Literatus</i>	2023 
• <b>[J.29] Issue 4</b> <i>Tap into Poetry</i>	2023 
• <b>[B.8] Titans</b> <i>Amazon Kindle Direct Publishing</i>	08/2023 
• <b>[J.28] The Three Pillars of AI: Symbols, Neurons, and Graphs</b> <i>The AI Journal</i>	2022 
• <b>[J.27] The Three Pillars of AI: Symbols, Neurons, and Graphs</b> <i>The AI Journal</i>	2022 
• <b>[A.4] Winter</b> <i>Poets Choice</i>	2022 
• <b>[A.3] Impressions of Love</b> <i>Pencil</i>	2022 
• <b>[B.7] Memory</b> <i>Waterton Publishing Company</i>	08/2022 
• <b>[J.26] Featured Writer</b> <i>Cajun Mutt Press</i>	2022 
• <b>[J.25] Spring 2022</b> <i>New Note Poetry</i>	2022 
• <b>[J.24] Issue 4</b> <i>The Pine Cone Review</i>	2022 
• <b>[J.23] Poem</b> <i>Rusted Radishes</i>	2022 
• <b>[J.22] Issue VII</b> <i>The Closed Eye Open</i>	2022 
• <b>[J.21] Issue 1</b> <i>BEATIFIC</i>	2021 
• <b>[J.20] Poem</b> <i>Jasad</i>	2021 
• <b>[J.19] Poem</b> <i>Salad Days</i>	2021 
• <b>[J.18] Poem</b> <i>Sledgehammer Lit</i>	2021 
• <b>[B.6] Correspondence</b> <i>Waterton Publishing Company</i>	08/2021 
• <b>[B.5] Stems from the Edge of Silence</b> <i>Waterton Publishing Company</i>	05/2020 
• <b>[J.17] Clogs</b> <i>Jellyfish Review</i>	2020 
• <b>[J.16] Terminal One</b> <i>Unite the World</i>	2020 
• <b>[J.15] Issue 13</b> <i>Emerge Literary Journal</i>	2020 
• <b>[J.14] Poems</b> <i>Kreaxxxion Review</i>	2020 
• <b>[J.13] Poem</b> <i>Hamline Lit</i>	2020 
• <b>[J.12] Poem</b> <i>Former People</i>	2020 

• <b>[J.11] Issue 1.7</b> <i>FEED Lit Magazine</i>	2020 
• <b>[J.10] Poem</b> <i>Open Arts Forum</i>	2020 
• <b>[J.9] Volume 4</b> <i>Press Pause Press</i>	2020 
• <b>[J.8] Poems</b> <i>Spillwords Press</i>	2020 
• <b>[J.7] Issue 34</b> <i>Poet Speak Magazine</i>	2020 
• <b>[J.6] Poem</b> <i>Poetry Potion</i>	2020 
• <b>[J.5] Poem</b> <i>Oddball Magazine</i>	2020 
• <b>[J.4] Issue 137</b> <i>Red Fez</i>	2020 
• <b>[J.3] Volume 3 Issue 2</b> <i>Ink In Thirds</i>	2019 
• <b>[B.4] It's a Big Big World</b> <i>Waterton Publishing Company</i>	07/2019 
• <b>[A.2] And We Chose Everything</b> <i>Turning Point Books</i>	2018 
• <b>[B.3] Vitality</b> <i>Waterton Publishing Company</i>	12/2018 
• <b>[B.2] Diary In Poems</b> <i>G&amp;J Productions</i>	04/2018 
• <b>[B.1] A Road Away From Home</b> <i>G&amp;J Productions</i>	01/2017 
• <b>[A.1] One Hundred Voices: Volume One</b> <i>Allegiant Publishing Group</i>	2016 
• <b>[J.2] Paying Dues</b> <i>Talking Soup</i>	2016 
• <b>[J.1] Volume 2 Issue IX</b> <i>The Rain, Party, &amp; Disaster Society</i>	2015 

## VOLUNTEER EXPERIENCE

• <b>First Aid Training</b> <i>Protection Civile Paris Seine</i> ◦ Passed the "PSC1 - Prévention et Secours Civiques de niveau 1" certification	07/2023 - 08/2023
• <b>Mentor</b> <i>JobIRL L'orientation In Real Life</i> ◦ Mentorship and job orientation for students looking to enter the data field	06/2022 - 02/2023
• <b>Mentor</b> <i>Social Builder</i> ◦ Mentor in the Women in Digital (WID) program ◦ Mentor in the Adabot program	09/2021 - 02/2023
• <b>Corporate Social Responsibility Member</b> <i>Yseop</i> ◦ Member of the CSR team ◦ Responsible for motivating local and global company initiatives ◦ Liaison with associations and organizations	03/2021 - 02/2023
• <b>Ambassador</b> <i>Data ScienceTech Institute School of Engineering</i> ◦ Student mentorship and job orientation	01/2020 - 02/2023
• <b>Editor</b> <i>Kiss My Poetry</i> ◦ Content selection and front-page editor	07/2020 - 12/2020
• <b>Volunteer</b> <i>Greater Paris University Hospitals - AP-HP</i> ◦ Data Science volunteer for COVID-19 data analysis tasks	03/2020 - 07/2020
• <b>Ambassador</b> <i>Beirut Poetics</i> ◦ Ambassador of the Beirut Poetics Lebanon branch journal ◦ Local poetry event organization and engagement of community members ◦ Promotion of cultural outreach of poetry	07/2018 - 12/2022

## PROFESSIONAL MEMBERSHIPS

• Global Network on Large-Scale Cross-domain and Multilingual Open Knowledge Graphs	2025 - Present
• Neuro-symbolic AI Interest Group at the Alan Turing Institute	2024 - Present
• Cognitive AI W3C Community Group	2024 - Present
• Artificial Intelligence Knowledge Representation W3C Community Group	2024 - Present
• Knowledge Graph Construction W3C Community Group	2024 - Present
• Knowledge Graphs Interest Group at the Alan Turing Institute	2024 - Present
• GDR RADIA	2024 - Present
• Association for Computational Linguistics	2022 - Present

## CERTIFICATIONS

• IBM: <a href="#">Neuro-Symbolic AI Essentials</a>	08/2022
• Neo4j: <a href="#">Certified Professional</a>	07/2022
• Udacity: <a href="#">Machine Learning DevOps Engineer</a>	05/2022
• Hasso Plattner Institute: <a href="#">Knowledge Graphs</a>	03/2022
• Neo4j: <a href="#">Graph Data Science Certified</a>	05/2022
• Massachusetts Institute of Technology: <a href="#">Minds and Machines</a>	02/2021
• Udacity: <a href="#">Deep Reinforcement Learning</a>	01/2021
• Leiden University: <a href="#">Miracles of Human Language: An Introduction to Linguistics</a>	11/2020
• Ecole Polytechnique Federale de Lausanne: <a href="#">Computational Neuroscience</a>	10/2020
• Saint Petersburg State University: <a href="#">Neurolinguistics</a>	10/2020
• The University of Edinburgh: <a href="#">Philosophy and the Sciences</a>	10/2020
• HSE University: <a href="#">Towards language universals through lexical semantics</a>	10/2020
• CentraleSupélec: <a href="#">Analysez vos données textuelles</a>	08/2019
• Université Grenoble Alpes: <a href="#">Introduction à la linguistique de corpus</a>	07/2019
• AWS Academy: <a href="#">Academy Cloud Computing Architecture</a>	12/2018
• Udacity: <a href="#">Artificial Intelligence</a>	07/2017

## ADDITIONAL INFORMATION

**Languages:** English (Native), French (Native), Arabic (Native)

**Interests:** Literature (Fiction, Philosophy, Classics, Computer Science), Musical Instruments (Electric Guitar), Sports (Football, Basketball, Running, Hiking, Tennis), French driving license

## REFERENCES

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