

Curriculum Vitae

Dr. Sabrina Amri

Contact Information

Dr. Sabrina Amri
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Google Scholar Profile

Profile

Ph.D. in Computer Science, specialized in Artificial Intelligence (AI) and Cybersecurity, with experience in Natural Language Processing (NLP), Machine Learning (ML), Explainable Artificial Intelligence (XAI), Multimodal Data Analysis, and Large Language Models (LLMs).

Education

Ph.D. in Computer Science | 2019 – 2024
University of Montreal, Canada

- Thesis: *“FACTS-ON: Fighting Against Counterfeit Truths in Online Social Networks: Fake News, Misinformation, and Disinformation.”*
- Focus: Detection and mitigation of false information using AI techniques, including transformers, explainable AI, and multimodal analysis.

Master’s in Intelligent and Pervasive Systems | 2015 – 2018
Higher Institute of Applied Sciences and Technology of Sousse, Tunisia

National Engineering Diploma in Computer Science | 2012 – 2015
Polytechnic School of Sousse, Tunisia

Applied Bachelor’s in Network and Services Administration | 2007 – 2010
Higher Institute of Applied Sciences and Technology of Sousse, Tunisia

Additional Training

Machine Learning for Life Sciences | March 2025
University of Montreal – IVADO | In-person continuing education (8h)

Professional Experience

Machine Learning Researcher | 2019 – 2024

University of Montreal, Canada

- Designed and developed several advanced fake news detection systems integrating textual content, images, social context, and external evidence, with a strong focus on explainability (XAI) and multimodal analysis (text and image).
- Developed **EXMULF**, an explainable platform based on ViBERT and LIME for multimodal fake news detection from social media posts.
- Created **ExFake**, a system combining NLP tasks (NER, NLI), web scraping techniques, and contextual analysis to identify disinformation with 90% accuracy.
- Designed **AFCC**, a framework for automatic inference of fact-checker consensus, using K-means clustering and Bayesian models to assess verification credibility.
- Built a disinformation classifier based on users' online personality using the Big Five model and a DistilBERT neural network, achieving 96% accuracy and outperforming five state-of-the-art models.
- Collected and processed large-scale data from platforms such as Twitter and Weibo, in collaboration with interdisciplinary research teams (engineers, data scientists).

Teaching Assistant | 2019 – 2023

University of Montreal, Canada

- **IFT1810: Introduction to Programming (C and Java).**
- **IFT1135: Introduction to Mobile Applications.**
 - Led lab sessions and taught the basics of programming in C, Java, and Android; presented tutorials, supervised exams, graded assignments, and supported students.

Software Developer Intern

Department of Telecommunications Engineering, School of Engineering, Linares, Jaén, Spain | 2017
Electronics and Microelectronics Laboratory, Faculty of Sciences, Monastir, Tunisia | 2015

- Designed optimization algorithms for virtual machine placement in cloud computing environments.
- Designed and developed web and mobile applications for medical assistance.

Project Coordinator | 2011 – 2012

Center for Strategic Studies and Development, Sidi Bouzid, Tunisia

- Team management, event coordination, and leadership of community development projects in collaboration with various organizations.

Intern in Coordination and Information Systems | 2011

Coordination Department of Saône-et-Loire, France

IT Support Intern | 2009 – 2010

Tunisie Telecom, Sousse, Tunisia

- Developed an FTP application for telecommunications.
- Familiarized with and maintained telecommunications infrastructure.

Technical Skills

- **Natural Language Processing (NLP):** BERT, Word2Vec, spaCy, LDA
- **Machine Learning:** Scikit-Learn, Deep Learning (including PyTorch, ViBERT), LIME (model interpretability), K-means clustering
- **Software Development and Programming:** Pascal, C/C++, Java, Python, PHP5, HTML5, CSS3, JavaScript, Prolog, Lisp, MySQL, SQL, Mobile Development (Android), Embedded Development (Arduino, VHDL), MongoDB, JSON, Scrapy
- **Cisco Certifications:** Cisco CCNA1, 2, 3

Languages

Arabic: Native | **French:** Fluent | **English:** Fluent