





# GAROUANI Moncef

 Born April 04, 1997 in El-Menzel, Morocco  
 Phone: (+33) [0]6 44 77 99 07  
 Email: mgarouani@gmail.com  
 Website: www.mgarouani.fr  
 Google Scholar: Moncef Garouani  
 Github: LeMGarouani



## EDUCATION

---

**Université du Littoral Côte d’Opale & Université Hassan II (cotutelle)** Calais, France  
**Ph.D.** in Computer Science & Artificial intelligence in Industry 4.0  
Advisors: Mourad Bouneffa , Mohamed Hamlich Sep. 2019–2022  
Thesis title: Towards Efficient and Explainable Automated Machine Learning Pipelines Design  
Committee: P. Parrend, A. Azmani, S. Ventura, S. Verel, A. Majda, N.Youssfi

**Université Sidi Mohammed Ben Abdellah** Fez, Morocco  
**M.S.** in Computer Science–Data science 2017–2019  
– Thesis: “Sentiment analysis of Moroccan Tweets unig text mining”  
\* *USMBA award for best M.S. dissertation in Computer Science*

**Université Sidi Mohammed Ben Abdellah** Fez, Morocco  
**B.S.** in Computer Science 2014–2017  
– Thesis: “Design and development of a web platform for managing the prefecture’s archives”

## EXPERIENCE

---

**Associate Professor (Maître de Conférences)** Toulouse, France  
University Toulouse Capitole Sep 2023- Now  
– Toulouse Research Institute In Information Technology (IRIT)  
– Systèmes d’Informations Généralisés (SIG) team

**Temporary Lecturer and Research Assistant (ATER)** Calais, France  
Engineering School of Littoral Côte d’Opale Sep. 2022- Aug. 2023  
– Automated machine learning researcher  
– Data science lecturer

**Lecturer in computer science** Calais, France  
Engineering School of Littoral Côte d’Opale Sep.2021 – Jul. 2022

**Research Collaborator** Casablanca, Morocco  
Study and Research Center for Engineering and Management, HESTIM Jun.2020 – Sep.2022  
– Automated machine learning researcher

**Data Scientist** Rabat, Morocco  
The Good Data Factory Aug. – Dec. 2019  
– Data analysis & Computer vision projects

**Research internship** Fez, Morocco  
The Intelligent Systems & Applications Laboratory Jan. – Jul. 2019  
– Natural Language Processing researcher

## TEACHING

---

- **Associate Professor (MCF)** at the University Toulouse 1 Capitole Sep. 2023 – Now  
*Explainable Artificial Intelligence , Business Intelligence*  
*Data Integration with Talend , Bases de Données*
- **Assistant Lecturer (ATER)** at the Engineering School of Littoral Côte d'Opale Sep. 2022 – Aug. 2023  
*Big data , Explainable Artificial Intelligence , Business Intelligence*  
*Advanced OOP in C++ , Bases de Données*
- **Teaching Assistant** at the Engineering School of Littoral Côte d'Opale Sep. 2021 – Aug. 2022  
*Advanced algorithmic with OOP in Python & C++*  
*Architecture des ordinateurs , Bases de Données*
- **Teaching Assistant** at the university Institute of Technology of Littoral Côte d'Opale Sep. 2021 – Aug. 2022  
*Advanced algorithmic with OOP in Python & Java*  
*Bases de Données , Mathematics*

## RESEARCH INTERESTS

---

- Automated machine learning
- Artificial Intelligence and Big Data
- Explainability of Artificial Intelligence
- Research software engineering
- Natural language processing
- Computer vision

## TEACHING INTERSETS

---

- Artificial intelligence
- Big data & Cloud computing
- Bases de données & Data mining
- Algorithmic & programming languages
- Statistics & Data analysis
- Mathematics

## COMPETITIVE GRANTS AND FELLOWSHIPS

---

- **University of Milan** - 4EU+ Summer school on AI fellowship Aug. 2022
- **Université du Littoral Côte d'Opale** - PhD grant 2019-2022
- **CNRST Morocco** - Research Excellence Scholarship 2019-2022

## AWARDS

---

- 1st prize: Enjoyeering junior (Robotics) - 2016
- 1st prize: PROTOTOP (Robotics) - 2017
- 2nd prize: Entrepreneurship project (AUF Maghreb)
- 2nd prize: Challenge Hackathome (Accenture France)

## PROFESIONAL CERTIFICATIONS

---

- **IBM** Data scientist Professional certificate
- **IBM** AI engineering Professionnal certificate
- **DELL EMC** Data science & Big data analytics
- **University of Milan** AutoML competencies certificate

## COMMUNITY ROLES

---

- **Member of Technical Program Committee**
  - *The 16th International Conference on Information Processing*
  - *The 19th International Conference on Mobile Systems and Pervasive Computing*
  - *The 4th International Conference on Smart Applications and Data Analysis for Smart Cyber-Physical Systems*
  - *The 1st International Conference on AI-generated Content (AIGC2023)*
- **Reviewer**
  - *Information Fusion*
  - *Journal of Computing in Higher Education*
  - *Intelligent Information Management Journal*
  - *Journal of Computational and Cognitive Engineering*

### Journals

- [1] **M. Garouani** et al. “Version [2.0]- [AMLBIID: An auto-explained Automated Machine Learning tool for Big Industrial Data]”. In: *SoftwareX* 23 (July 2023), p. 101444. DOI: 10.1016/j.softx.2023.101444.
- [2] **M. Garouani** et al. “Autoencoder-kNN meta-model based data characterization approach for an automated selection of AI algorithms”. In: *Journal of Big Data* 10.1 (Feb. 2023). DOI: 10.1186/s40537-023-00687-7.
- [3] **M. Garouani** et al. “Using meta-learning for automated algorithms selection and configuration: an experimental framework for industrial big data”. In: *Journal of Big Data* 9.1 (Apr. 2022). DOI: 10.1186/s40537-022-00612-4.
- [4] **M. Garouani** et al. “Towards big industrial data mining through explainable automated machine learning”. In: *The International Journal of Advanced Manufacturing Technology* 120.1-2 (Feb. 2022), pp. 1169–1188. DOI: 10.1007/s00170-022-08761-9.
- [5] **M. Garouani** et al. “AMLBIID: An auto-explained Automated Machine Learning tool for Big Industrial Data”. In: *SoftwareX* 17 (Jan. 2022), p. 100919. DOI: 10.1016/j.softx.2021.100919.
- [6] M. Chaabi, M. Hamlich, and **M. Garouani**. “Product defect detection based on convolutional autoencoder and one-class classification”. In: *IAES International Journal of Artificial Intelligence* 12 (Oct. 2022), pp. 912–920. DOI: 10.11591/ijai.v12.i2.pp912-920.
- [7] **M. Garouani**, A. Ahmad, and M. Bouneffa. “A Survey and Perspective View of Meta-Learning for Automated Algorithms Selection and Parametrization”. In: *Submitted to ACM Computing Surveys* (Jan. 2023).
- [8] **M. Garouani** and M. Bouneffa. “Automated Machine Learning Hyperparameters Tuning through Meta-Guided Bayesian Optimization”. In: *Submitted to Progress in Artificial Intelligence* (May 2023).

### Conferences

- [9] **M. Garouani**, A. Ahmad, and M. Bouneffa. “Explaining Meta-Features Importance in Meta-Learning Through Shapley Values”. In: *Proceedings of the 25th International Conference on Enterprise Information Systems - Volume 1: ICEIS, INSTICC*. SciTePress, 2023, pp. 591–598. DOI: 10.5220/0011986600003467.
- [10] **M. Garouani** et al. “Scalable Meta-Bayesian Based Hyperparameters Optimization for Machine Learning”. In: *Smart Applications and Data Analysis*. Springer International Publishing, 2022, pp. 173–186. DOI: 10.1007/978-3-031-20490-6\_14.
- [11] M. Choab, **M. Garouani**, and al. “Automated Decision Support Framework for IoT: Towards a Cyber Physical Recommendation System”. In: *Proceedings of the 25th International Conference on Enterprise Information Systems - Volume 1: ICEIS, INSTICC*. SciTePress, 2023, pp. 365–373. DOI: 10.5220/0011848900003467.
- [12] M. Chaabi, M. Hamlich, and **M., Garouani**. “Evaluation of AutoML Tools for Manufacturing Applications”. In: *Advances in Integrated Design and Production II*. Cham: Springer International Publishing, 2023, pp. 323–330. DOI: 10.1007/978-3-031-23615-0\_33.
- [13] **M. Garouani** et al. “Toward an Automatic Assistance Framework for the Selection and Configuration of Machine Learning Based Data Analytics Solutions in Industry 4.0”. In: *Proceedings of the 5th International Conference on Big Data and Internet of Things*. Springer International Publishing, 2022, pp. 3–15. DOI: 10.1007/978-3-031-07969-6\_1.

- [14] **M. Garouani** et al. “Towards meta-learning based data analytics to better assist the domain experts in industry 4.0”. In: *Artificial Intelligence in Data and Big Data Processing*. Cham: Springer International Publishing, 2022, pp. 265–277. DOI: 10.1007/978-3-030-97610-1\_22.
- [15] **M. Garouani** and K. Zaysa. “Leveraging the automated machine learning for Arabic opinion mining: A preliminary study on AutoML tools and comparison to human performance”. In: *Digital Technologies and Applications*. Lecture notes in networks and systems. Cham: Springer International Publishing, 2022, pp. 163–171. DOI: 10.1007/978-3-031-02447-4\_17.
- [16] **M. Garouani**, H. Chrita, and J. Kharroubi. “Sentiment analysis of Moroccan tweets using text mining”. In: *Digital Technologies and Applications*. Lecture notes in networks and systems. Cham: Springer International Publishing, 2021, pp. 597–608. DOI: 10.1007/978-3-030-73882-2\_54.
- [17] **M. Garouani** et al. “Towards the Automation of Industrial Data Science: A Meta-learning based Approach”. In: *Proceedings of the 23rd International Conference on Enterprise Information Systems*. SCITEPRESS - Science and Technology Publications, 2021. DOI: 10.5220/0010457107090716.
- [18] **M. Garouani** and J. Kharroubi. “Towards a new lexicon-based features vector for sentiment analysis: Application to Moroccan Arabic tweets”. In: *Advances in Information, Communication and Cybersecurity*. Lecture notes in networks and systems. Cham: Springer International Publishing, 2022, pp. 67–76. DOI: 10.1007/978-3-030-91738-8\_7.
- [19] **M. Garouani** and J. Kharroubi. “MAC: An open and free Moroccan Arabic corpus for sentiment analysis”. In: *Innovations in Smart Cities Applications Volume 5*. Lecture notes in networks and systems. Springer International Publishing, 2022, pp. 849–858. DOI: 10.1007/978-3-030-94191-8\_68.

## Softwares

- [20] **M. Garouani**, M. Bouneffa, and A. Ahmad. *AMLBID 2.0: An auto-explained Automated Machine Learning tool for Big Industrial Data*. Version 2.0. June 2023. DOI: 10.1016/j.softx.2023.101444.
- [21] **M. Garouani**, A. Ahmad, and M. Bouneffa. *AMLBID: An auto-explained Automated Machine Learning tool for Big Industrial Data*. Version 0.2. July 2022. DOI: 10.1016/j.softx.2021.100919.