Detailed CV of Dr. Youcef Djenouri

1 Curriculum vital

1.1 Personnel Information

- **Last Name:** Djenouri.
- **First Name:** Youcef.
- **Birth Date:** 20 June 1989.
- **Citizenship:** Algerian.
- **Situation in Norway:** Permanent Residence.
- **Address:** Tante Ulrikkes vei 67, 0984, Oslo, Norway.
- **Phone Number:** +47 464 439 25.
- **Email:** yodj@norceresearch.no
- **Personnel Web Page:** https://sites.google.com/site/youcefdjenouri/
- **ORCID Researcher ID:** https://orcid.org/0000-0003-0135-7450.

1.2 Positions and affiliations

- **2023**– Associate Professor at University of South-Eastern Norway (Konsberg, Norway) [full-time].
- **2023**– Senior Researcher at NORCE Norwegian Research Center (Oslo, Norway) [part-time].
- **2020–2023** Research Scientist at SINTEF Digital (Oslo, Norway).
- **2018-2020**: Postdoctoral researcher at NTNU (Trondheim, Norway).
- **2017-2018**: Postdoctoral researcher at SDU (Odense, Denmark).
- **2015-2017**: Assistant Professor in Artificial Intelligence at USDB (Blida, Algeria).
- **2011-2015**: Researcher Engineer at CERIST (full time) and temporary lecturer at USTHB and USDB (part time), (Algiers, Algeria).

1.3 Education

- **2011 – 2014** Ph.D in Computer Science (Artificial Intelligence), "Mining Association Rules on GPU", USTHB, Algiers, Algeria, and University of Lorraine, Metz, France.
- **2009 – 2011** Master in Computer Science (Artificial Intelligence), "From data mining to knowledge mining, application to intelligent agent", USTHB, Algiers, Algeria.
- **2006 – 2009** Bachelor in Computer Science, "File Secure Transfer Protocol via Wimax", USDB, Blida.

1.4 Languages

Arab: mother tongue
Norwegian: level B1.
English: very good.
French: very good.

2 Research Activities

2.1 Funding Projects, and Grants

1. DMA (Data Mining Applications) [**Personal Grant**]: approximately (2.4 MNOK), ERCIM grant and NTNU, Norway, 2018-2020. (acceptance rate below 10%).

2. Ph.D student Internship [Personal Grant]: (20 KNOK), USTHB, LRIA lab, I was granted for the internship during my Ph.D. I has been selected from 18 Ph.D students. (acceptance rate below to 5%).

3. Intelligent Hand-Held Ultrasound Device [Work Package Leader]: (14.2 MNOK), Norwegian Research Council and GE healthcare as industrial partners, 2020-2024.

4. Advanced 3D visualization and AR for industrial operation [Work Package Leader]: (5 MNOK), Norwegian Research Council and Cognite as industrial partner, 2020-2022.

5. A Drill floor Robotic System for Automated Operations [Member]: (11.8 MNOK), Norwegian Research Council and VARCO Norway As, 2020-2023.

6. Image-guided neurosurgery [Member]: Funded by Norwegian National Advisory Unit for Ultrasound and Image Guided Therapy, St. Olavs hospital and NTNU as Cooperation Partners, 2022-2022.

7. ITS (Intelligent Traffic Systems) [Work Package Leader]: (3 MNOK), Danish Research Council and Odense Kommune as industrial partner, 2017-2018.

8. Short-range high-resolution 3D real-time imaging for robotic vision [Member]: (1.5 MNOK). European Space Agency, 2022-2022.

9. The Information Mining with a Span of Fuzzy and Causality Approaches, UH-nett Vest [Member], (170K NOK), 2019-2020.

10. An Utility-driven Data Mining Framework and its Applications [Member]: (983 KNOK), Shenzhen Peacock Innovation and Entrepreneurship Project, 2018-2019.

11. Key Research to Secure E-Commerce Data based on Distortion Techniques [Member]: (368 KNOK), Shenzhen Fundamental Research Project, 20172019.

2.2 Academic Awards

1. Best paper award at 21st Pacific-Asia Conference on Knowledge Discovery and Data Mining.
2. Best paper award at 12th International Conference on Genetic and Evolutionary Computing.
3. FUZZ-IEEE Best Paper Finalist at IEEE International International Conference on Fuzzy Systems (FUZZ-IEEE 2020).
4. Prize for top 300 in Norway most productive researcher for all disciplines for the years 2018-2020, SINTEF.
5. Prize for top 11 in Norway most productive researcher for all disciplines for the year 2021, SINTEF.
6. IEEE member.

2.3 Invited Talks and Tutorials

1. Invited Talk: "Modern Recurrent Neural Networks: Algorithms, Applications, and Challenges" at IDEAS-NCBR, (26/01/2023), Warsaw, Poland.
2. Invited Talk: "Outlier Detection in IoT: Algorithms and Challenges" at HVL, (21/06/2022), Bergen, Norway.
3. Invited tutorial: "Urban Traffic Outlier Detection: Algorithms, Taxonomies, and Discussions" at 8th International Conference on Web Intelligence, Mining, and Semantics, (25-28/06/2019), Novi Sad, Serbia.
4. Invited Talk: "Urban Traffic Outlier Detection" at Zenith Team, at INRIA, (14/02/2019), Montpelier, France.
5. Invited Talk: "Pattern Mining: An Horizontal Exploration" at Department of Computer Science, at Tartu University, (02/04/2019), Tartu, Estonia.
6. Invited Talk: "Pattern Mining Applications" at Department of Computing, at Umea University, (12/06/2019), Umea, Sweden.
7. Invited Talk: "Data Mining Techniques for Smart City Applications: Case Study on Intelligent Transportation Systems." at AGYA (Arab-German Young Academy) Workshop on Soft Computing and Data Mining for Energy and Environment, (18-19/07/2019), Rabat, Morocco.

8. Invited Talk: "Outlier detection in Intelligent Transportation Systems" at AGYA (Arab-German Young Academy) Workshop on Recent and Future Innovation for Urban Mobility in Smart Cities, (25-26/07/2019), Berlin, Germany.

9. Invited Talk: "Machine Learning Application to Sea Food Analysis" at NOFIMA, (11/09/2019), Trmso, Norway.

2.4 Metrics

#Citations: +2800, h-index: 30, #Publications: +150.

2.5 Organisation of Scientific Meetings

1. 2016–2019: General co-Chair, International Conference on Genetic and Evolutionary Computing (2016 in China, 2017 in Taiwan, 2018 in China, 2019 in China), about 100 participants each year

2. 2016–2018 Invited Session Chair, Multidisciplinary International social networks Conference (2016 in USA, 2017 in Japan, 2018 in France), about 80 participants each year.

3. 2018: Workshop co-Chair and Organizer, ACM KDD-UDM Workshop, about 20 participants of the workshop, UK.

4. 2018: Publicity Chair, International Conference on Big Data Analysis and Deep Learning, Japan, about 100 participants.

5. 2010–2022: Invited Session Chair for 25 conferences; it is about 20 participants of each session of the conferences.

2.6 Services

Associate Editor Discover Artificial Intelligence Journal.
Editorial Board Member Applied Intelligence Journal.
Committee Member of (+30) conferences AAAI, FUZZ-IEEE, IEEE Big Data Congress, DCAI, KDD, ICDM, IEEE Big Data Congress, PAKDD (Program Chair), FLAIRS Conference...
Review Board Member (+40) journals IEEE Transactions on Data and Knowledge Engineering, ACM Transactions on Knowledge Discovery from Data, IEEE Transactions on Dependable and Secure Computing, IEEE Transactions on Evolutionary Computation. IEEE Transactions on Cybernetics, IEEE Transactions on

Industrial Informatics, IEEE Transactions on Systems, Man, and Cybernetics: Systems, IEEE Transactions on Big Data. IEEE Transactions on Emerging Topics in Computational Intelligence, IEEE Transactions on Vehicular Technology, IEEE Internet of Things, IEEE Access, Information Fusion, Machine Learning with Applications, Computer Communications, Expert Systems with Applications, Engineering Application of Artificial Intelligence, Artificial Intelligence in Medicine, Applied Soft Computing, Knowledge-based Systems....

2.7 Supervisions

Ph.D [4 Students],

1. 2018-now Usman Ahmed, HVL (Bergen, Norway), Application of Intelligent Methods in IoT environment.
2. 2019-now Roza Abolghasemi, OsloMet (Oslo, Norway), Exploring Intelligent Methods for Explaining Recommendation Systems.

   2016-2022 [Defended October 2022] Roufaida Laidi, ESI, (Algiers, Algeria): Optimal deployment and setting of wireless sensor nodes for energy management in smart building.
3. 2016-2021 [Defended January 2021] Hiba Belhadi, USTHB (Algiers, Algeria), Exploring Machine Learning Techniques for Knowledge Graph Matching.

Master Students [+20 Students],
Bachelor [+30 Students],

3 Publications

References

[1] Asma Belhadi et al. "BIoMT-ISeg: Blockchain internet of medical things for intelligent segmentation". In: *Frontiers in Physiology* 13 (2023), p. 2744.

[2] Asma Belhadi et al. "Fast and Accurate Framework for Ontology Matching in Web of Things". In: *ACM Transactions on Asian and Low-Resource Language Information Processing* (2023).

[3] Youcef Djenouri et al. "A Secure Parallel Pattern Mining System for Medical Internet of Things". In: *IEEE/ACM Transactions on Computational Biology and Bioinformatics* (2023).

[4] Youcef Djenouri et al. “Advanced Pattern-Mining System for Fake News Analysis”. In: *IEEE Transactions on Computational Social Systems* (2023).

[5] Youcef Djenouri et al. “Hybrid graph convolution neural network and branch-and-bound optimization for traffic flow forecasting”. In: *Future Generation Computer Systems* 139 (2023), pp. 100–108.

[6] Usman Ahmed et al. “Knowledge graph based trajectory outlier detection in sustainable smart cities”. In: *Sustainable Cities and Society* 78 (2022), p. 103580.

[7] Asma Belhadi et al. “Group intrusion detection in the Internet of Things using a hybrid recurrent neural network”. In: *Cluster Computing* (2022), pp. 1–12.

[8] Asma Belhadi et al. “Hybrid intelligent framework for automated medical learning”. In: *Expert Systems* 39.6 (2022), e12737.

[9] Djamel Djenour, Roufaida Laidi, and Youcef Djenouri. “Deep Learning for Estimating Sleeping Sensorfffdfffdfffds Values in Sustainable IoT Applications”. In: *2022 International Balkan Conference on Communications and Networking (BalkanCom)*. IEEE. 2022, pp. 147–151.

[10] Youcef Djenouri, Asma Belhadi, and Jerry Chun-Wei Lin. “Recurrent neural network with density-based clustering for group pattern detection in energy systems”. In: *Sustainable Energy Technologies and Assessments* 52 (2022), p. 102308.

[11] Youcef Djenouri et al. “An edge-driven multi-agent optimization model for infectious disease detection”. In: *Applied Intelligence* (2022), pp. 1–12.

[12] Youcef Djenouri et al. “An Intelligent Collaborative Image-Sensing System for Disease Detection”. In: *IEEE Sensors Journal* (2022).

[13] Youcef Djenouri et al. “An ontology matching approach for semantic modeling: A case study in smart cities”. In: *Computational Intelligence* 38.3 (2022), pp. 876–902.

[14] Youcef Djenouri et al. “Artificial intelligence of medical things for disease detection using ensemble deep learning and attention mechanism”. In: *Expert Systems* (2022), e13093.

[15] Youcef Djenouri et al. “Deep learning based decomposition for visual navigation in industrial platforms”. In: *Applied Intelligence* 52.7 (2022), pp. 8101–8117.

[16] Youcef Djenouri et al. “Deep learning based hashtag recommendation system for multimedia data”. In: *Information Sciences* 609 (2022), pp. 1506–1517.

[17] Youcef Djenouri et al. "How Image Retrieval and Matching Can Improve Object Localisation on Offshore Platforms". In: *Intelligent Data Engineering and Automated Learning–IDEAL 2022: 23rd International Conference, IDEAL 2022, Manchester, UK, November 24–26, 2022, Proceedings*. Springer International Publishing Cham. 2022, pp. 262–270.

[18] Youcef Djenouri et al. "Hybrid RESNET and Regional Convolution Neural Network Framework for Accident Estimation in Smart Roads". In: *IEEE Transactions on Intelligent Transportation Systems* (2022).

[19] Youcef Djenouri et al. "Intelligent Deep Fusion Network for Anomaly Identification in Maritime Transportation Systems". In: *IEEE Transactions on Intelligent Transportation Systems* (2022).

[20] Youcef Djenouri et al. "Intelligent deep fusion network for urban traffic flow anomaly identification". In: *Computer Communications* 189 (2022), pp. 175–181.

[21] Youcef Djenouri et al. "Intelligent Graph Convolutional Neural Network for Road Crack Detection". In: *IEEE Transactions on Intelligent Transportation Systems* (2022).

[22] Youcef Djenouri et al. "Sensor data fusion for the industrial artificial intelligence of things". In: *Expert Systems* 39.5 (2022), e12875.

[23] Youcef Djenouri et al. "Toward a Cognitive-Inspired Hashtag Recommendation for Twitter Data Analysis". In: *IEEE Transactions on Computational Social Systems* (2022).

[24] Youcef Djenouri et al. "Vehicle detection using improved region convolution neural network for accident prevention in smart roads". In: *Pattern Recognition Letters* 158 (2022), pp. 42–47.

[25] Youcef Djenouri et al. "When explainable AI meets IoT applications for supervised learning". In: *Cluster Computing* (2022), pp. 1–11.

[26] Jerry Chun-Wei Lin et al. "Efficient evolutionary computation model of closed high-utility itemset mining". In: *Applied Intelligence* (2022), pp. 1–13.

[27] Tinhinane Mezair et al. "A sustainable deep learning framework for fault detection in 6G Industry 4.0 heterogeneous data environments". In: *Computer Communications* 187 (2022), pp. 164–171.

[28] Tinhinane Mezair et al. "Towards an Advanced Deep Learning for the Internet of Behaviors: Application to Connected Vehicles". In: *ACM Transactions on Sensor Networks* 19.2 (2022), pp. 1–18.

[29] Usman Ahmed et al. "A deep Q-learning sanitization approach for privacy preserving data mining". In: *Adjunct Proceedings of the 2021 International Conference on Distributed Computing and Networking*. 2021, pp. 43–48.

[30] Usman Ahmed et al. "A nutrient recommendation system for soil fertilization based on evolutionary computation". In: *Computers and Electronics in Agriculture* 189 (2021), p. 106407.

[31] Usman Ahmed et al. "Detection of Trajectory Outliers in Intelligent Transportation Systems". In: *2021 IEEE International Conference on Big Data (Big Data)*. IEEE. 2021, pp. 5484–5490.

[32] Usman Ahmed et al. "Deviation point curriculum learning for trajectory outlier detection in cooperative intelligent transport systems". In: *IEEE Transactions on Intelligent Transportation Systems* (2021).

[33] Asma Belhadi et al. "Deep learning for pedestrian collective behavior analysis in smart cities: A model of group trajectory outlier detection". In: *Information Fusion* 65 (2021), pp. 13–20.

[34] Asma Belhadi et al. "Hybrid group anomaly detection for sequence data: application to trajectory data analytics". In: *IEEE Transactions on Intelligent Transportation Systems* (2021).

[35] Asma Belhadi et al. "Machine learning for identifying group trajectory outliers". In: *ACM Transactions on Management Information Systems (TMIS)* 12.2 (2021), pp. 1–25.

[36] Asma Belhadi et al. "Privacy reinforcement learning for faults detection in the smart grid". In: *Ad Hoc Networks* 119 (2021), p. 102541.

[37] Asma Belhadi et al. "Reinforcement learning multi-agent system for faults diagnosis of mircoservices in industrial settings". In: *Computer Communications* 177 (2021), pp. 213–219.

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[39] Youcef Djenouri, Djamel Djenouri, and Jerry Chun-Wei Lin. "Trajectory outlier detection: New problems and solutions for smart cities". In: *ACM Transactions on Knowledge Discovery from Data (TKDD)* 15.2 (2021), pp. 1–28.

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[56] Khiati Mustapha et al. "LSTM for Periodic Broadcasting in Green IoT Applications over Energy Harvesting Enabled Wireless Networks: Case Study on ADAPCAST". In: *2021 17th International Conference on Mobility, Sensing and Networking (MSN)*. IEEE. 2021, pp. 694–699.

[57] Martha Roseberry et al. "Self-adjusting k nearest neighbors for continual learning from multi-label drifting data streams". In: *Neurocomputing* 442 (2021), pp. 10–25.

[58] Gautam Srivastava et al. "Security protocol of sensitive high utility itemset hiding in shared IoT environments". In: *Digital Communications and Networks* (2021).

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[66] Asma Belhadi et al. "A recurrent neural network for urban long-term traffic flow forecasting". In: *Applied Intelligence* 50.10 (2020), pp. 3252–3265.

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