

Mohamed Reda Bouadjenek – Ph.D, Lecturer in Applied AI

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Citizenship	Algerian Citizen; French Citizen; Canadian Permanent Resident; Australian Permanent Resident.																		
Interests	Information Retrieval, Biomedical Text Mining, Social Network Analysis, Machine Learning, Deep Learning, Recommender Systems, Databases, Data Quality, and Data Analysis.																		
Education	<p>Deakin University, Geelong, Australia Graduate Certificate of Higher Education for Learning and Teaching (Jun. 2021)</p> <p>University of Paris-Saclay, Versailles, France Ph.D., Computer Science (Dec. 2013) • Supervisors: Mokrane Bouzeghoub and Hakim Hacid • Research Field: <i>Information Retrieval and Machine Learning</i></p> <p>University of Paris-Saclay, Versailles, France M.S., Computer Science (Sep. 2009) • Supervisors: Mokrane Bouzeghoub • Major: <i>Databases and Distributed Information Systems</i></p> <p>University of Sciences and Technology Houari Boumediene, Algiers, Algeria B.S., Computer Science (Jun. 2008) • Major: <i>Databases and Information Systems</i></p>																		
Employment	<table><tr><td>Deakin University, Geelong, VIC, Australia. • <i>Lecturer (Assistant Professor)</i>, Applied Artificial Intelligence.</td><td>Nov. 2019 – Present</td></tr><tr><td>University of Toronto, Toronto, ON, Canada. • <i>Research Fellow</i>. Supervisor: Scott Sanner.</td><td>Nov. 2017 – Oct. 2019</td></tr><tr><td>The University of Melbourne, Melbourne, VIC, Australia. • <i>Research Fellow</i>. Supervisor: Karin Verspoor and Justin Zobel.</td><td>Sep. 2015 – Sep. 2017</td></tr><tr><td>Oregon State University, Corvallis, OR, USA. • <i>Visiting Researcher</i>. Supervisor: Scott Sanner.</td><td>Jul. 2015 – Aug. 2015</td></tr><tr><td>INRIA, Montpellier, France. • <i>Postdoc Researcher</i>. Supervisors: Esther Pacitti and Patrick Valduriez.</td><td>Jan. 2014 – Jul. 2015</td></tr><tr><td>UCSB, Santa Barbara, CA, USA. • <i>Visiting Researcher</i>. Supervisor: Amr El Abbadi.</td><td>Nov. 2014 – Dec. 2014</td></tr><tr><td>NICTA, Canberra, ACT, Australia. • <i>Visiting Researcher</i>. Supervisor: Scott Sanner.</td><td>Aug. 2013 – Dec. 2013</td></tr><tr><td>Alcatel-Lucent Bell Labs, Nozay, France. • <i>Research Engineer</i>. Supervisor: Hakim Hacid.</td><td>Mar. 2010 – Mar. 2013</td></tr><tr><td>DAVID Lab, University of Paris-Saclay, Versailles, France. • <i>Master Student Internship</i>. Supervisor: Mokrane Bouzeghoub.</td><td>Apr. 2009 – Sep. 2009</td></tr></table>	Deakin University , Geelong, VIC, Australia. • <i>Lecturer (Assistant Professor)</i> , Applied Artificial Intelligence.	Nov. 2019 – Present	University of Toronto , Toronto, ON, Canada. • <i>Research Fellow</i> . Supervisor: Scott Sanner.	Nov. 2017 – Oct. 2019	The University of Melbourne , Melbourne, VIC, Australia. • <i>Research Fellow</i> . Supervisor: Karin Verspoor and Justin Zobel.	Sep. 2015 – Sep. 2017	Oregon State University , Corvallis, OR, USA. • <i>Visiting Researcher</i> . Supervisor: Scott Sanner.	Jul. 2015 – Aug. 2015	INRIA , Montpellier, France. • <i>Postdoc Researcher</i> . Supervisors: Esther Pacitti and Patrick Valduriez.	Jan. 2014 – Jul. 2015	UCSB , Santa Barbara, CA, USA. • <i>Visiting Researcher</i> . Supervisor: Amr El Abbadi.	Nov. 2014 – Dec. 2014	NICTA , Canberra, ACT, Australia. • <i>Visiting Researcher</i> . Supervisor: Scott Sanner.	Aug. 2013 – Dec. 2013	Alcatel-Lucent Bell Labs , Nozay, France. • <i>Research Engineer</i> . Supervisor: Hakim Hacid.	Mar. 2010 – Mar. 2013	DAVID Lab, University of Paris-Saclay , Versailles, France. • <i>Master Student Internship</i> . Supervisor: Mokrane Bouzeghoub.	Apr. 2009 – Sep. 2009
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External Grant Funding

- **Co-PI, US Air Force Office of Scientific Research (AFOSR), Asian Office of Aerospace Research and Development (2022).**
Title: *Machine Learning in Heterogeneous Data from Multiple Sources* (USD\$225K).
- **PI, Community Bank at Deakin University (2022).**
Title: *Deakin AI Challenge 2022* (AUD\$3,000).
- **Co-PI, Defence Science and Technology: AI for Decision Making Initiative (2021).**
Title: *Utilizing Extractive-Abstractive Summarization for Understanding the Narrative of Social Media Users from Multimodal Data* (AUD\$20K).
- **PI, Community Bank at Deakin University (2021).**
Title: *Deakin AI Challenge 2021* (AUD\$1,000).
- **Ontario Center of Excellence Postdoctoral Fellowship (2018-2019).**
Title: *Machine Learning, Sentiment, and Social Media Analysis for Financial Analytics* (CAD\$50K).
- **Inria@SiliconValley Postdoctoral Fellowship, BIGDATANET associate team (UC Santa Barbara, ZENITH- Inria Sophia Antipolis). (2014-2015).**
Title: *Analysis and Infrastructure of Distributed Recommender Systems* (EUR€47K).

Awards and Honors

- **Best Demo Paper at the 23rd IEEE International Conference on Mobile Data Management (MDM), 2022.**
Title: “Jarvis: A Voice-based Context-as-a-Service Mobile Tool for a Smart Home Environment”.

Selected Publications

- 1 Z. Gao, T. Shen, Z. Mai, M.R. Bouadjenek, I. Waller, A. Anderson, R. Bodkin, and S. Sanner, “**Mitigating the Filter Bubble while Maintaining Relevance: Targeted Diversification with VAE-based Recommender Systems**”, In *The 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*, 2524-2531, 2022.
- 2 S. Gupta, M.R. Bouadjenek, and A. Robles-Kelly, “**An Analysis of Logic Rule Dissemination in Sentiment Classifiers**”, In *The Conference and Labs of the Evaluation Forum (CLEF)*, 1-8, 2022.
- 3 M.R. Bouadjenek, S. Sanner, Z. Iman, L. Xie, and X. Shi. “**A Longitudinal Study of Topic Classification on Twitter**”, In *PeerJ Computer Science*, 2022.
- 4 N.D. Huynh, M.R. Bouadjenek, A. Hassani, I. Razzak, K. Lee, C. Arora, and A. Zaslavskya, “**Jarvis: A Voice-based Context-as-a-Service Mobile Tool for a Smart Home Environment**”, In *The 23rd IEEE International Conference on Mobile Data Management (MDM)*, 318-312, 2022. [Best Demo Paper Award]
- 5 I. Razzak, S. Naz, A. Ashraf, F. Khalifa, M.R. Bouadjenek, and S. Mumtaz, “**Mutliresolutional ensemble PartialNet for Alzheimer detection using MR imaging data**”, In *International Journal of Intelligent Systems*, 1-18, 2022.
- 6 K. Lefevre, C. Arora, K. Lee, A. Zaslavsky, M.R. Bouadjenek, A. Hassani, and I. Razzak, “**ModelOps for Enhanced Decision-Making and Governance in Emergency Control Rooms**”, In *Environment Systems and Decisions*, 2022.
- 7 S. Lyu, A. Rana, S. Sanner, and M.R. Bouadjenek, “**A Workflow Analysis of Context-driven Conversational Recommendation**”, In *Proceedings of The Web Conference (WWW)*, 866–877, 2021.
- 8 A. Qayyum, M. Mazhar, I. Razzak, and M.R. Bouadjenek, “**Multilevel depth-wise context attention network with atrous mechanism for segmentation of COVID19 affected regions**”, In *Neural Computing and Applications*, 2021.
- 9 M. R. Bouadjenek, S. Sanner, and Y. Du, “**Relevance- and Interface-driven Clustering for Visual Information Retrieval**”, In *Information Systems*, Vol 94, 101592, 2020.
- 10 S. Gupta, A. Robels-Kelly, and M.R. Bouadjenek, “**Feature Extraction Functions for Neural Logic Rule Learning**”, In *Structural, Syntactic, and Statistical Pattern Recognition (S+SSPR)*, 98–107, 2020.
- 11 B. Zhang, S. Sanner, M. R. Bouadjenek, and S. Gupta, “**Bayesian Networks for Data Integration in the Absence of Foreign Keys**”, In *IEEE Transactions on Knowledge and Data Engineering*, Vol 32, 803–808, 2020.
- 12 S. Gupta, D. Ko, M.R Bouadjenek, and S. Sanner, A. Chong, P. Austin, and M. Koh, “**Evaluation of Machine Learning Algorithms for Predicting Readmission after Acute Myocardial Infarction Using Routinely Collected Clinical Data**”, In *Canadian Journal of Cardiology*, Vol 36, 878–885, 2020.
- 13 M. R. Bouadjenek, J. Zobel, and K. Verspoor, “**Automated Assessment of Biological Database Assertions Using the Scientific Literature**”, In *BMC Bioinformatics*, Vol 20, 216, 2019.
- 14 Y. Wang, G. Wu, M.R. Bouadjenek, and S. Sanner, “**A Novel Regularizer for Temporally Stable**

- Learning with an Application to Twitter Topic Classification**", In *The SIAM International Conference on Data Mining (SDM)*, 217–225, 2019.
- 15 M. R. Bouadjenek, H. Hacid, and M. Bouzeghoub, **"Personalized Social Query Expansion Using Social Annotations"**, In *Transactions on Large-Scale Data- and Knowledge-Centered Systems*, Vol 11360, 1–25, 2019.
 - 16 G. Wu, M. R. Bouadjenek, and S. Sanner, **"One-Class Collaborative Filtering with the Queryable Variational Autoencode"**, In *The 42nd International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*, 921–924, 2019.
 - 17 M. R. Bouadjenek, and S. Sanner, **"Relevance-driven Clustering for Visual Information Retrieval on Twitter"**, In *The 4th ACM Conference on Human Information Interaction & Retrieval (CHIIR)*, 349–353, 2019.
 - 18 M.R. Bouadjenek, E. Pacitti, F. Massegli, and A. El Abbadi, **"A Distributed Collaborative Filtering Algorithm Using Multiple Data Sources"**, In *10th International Conference on Advances in Databases, Knowledge, and Data Applications (DBKDA)*, 2018.
 - 19 M. R. Bouadjenek and K. Verspoor, **"Multi-Field Query Expansion is Effective for Biomedical Dataset Retrieval"**, In *Database: The Journal of Biological Databases and Curation (Oxford)*, Vol 2017, bax062, 2017.
 - 20 M. R. Bouadjenek, K. Verspoor, and J. Zobel, **"Learning Biological Sequence Types Using the Literature"**, In *The Proceedings of the 26th ACM Conference on Information and Knowledge Management (CIKM)*, 1991–1994, 2017.
 - 21 M. R. Bouadjenek, K. Verspoor, and J. Zobel, **"Automated Detection of Records in Biological Sequence Databases that are Inconsistent with the Literature."**, In *Journal of Biomedical Informatics*, Volume 71, 229–240, 2017.
 - 22 M. R. Bouadjenek, K. Verspoor, and J. Zobel, **"Literature Consistency of Bioinformatics Sequence Databases is Effective for Assessing Record Quality"**, In *Database: The Journal of Biological Databases and Curation (Oxford)*, Vol 2017, bax021, 2017.
 - 23 Z. Iman, S. Sanner, M. R. Bouadjenek, and L. Xie, **"A Longitudinal Study of Topic Classification on Twitter"**, In *The 11th International AAAI Conference on Web and Social Media (ICWSM)*, 552–555, 2017.
 - 24 M. R. Bouadjenek, H. Hacid, M. Bouzeghoub, and A. Vakali, **"PerSaDoR: Personalized Social Document Representation for Improving Web Search"**, In *Information Sciences*, Vol 369, 614–633, 2016.
 - 25 M. R. Bouadjenek, H. Hacid, and M. Bouzeghoub, **"Social Networks and Information Retrieval, How Are They Converging? A Survey, a Taxonomy and an Analysis of Social Information Retrieval Approaches and Platforms"**, In *Information Systems*, Vol 56, 1–18, 2016.
 - 26 M. Golestan Far, S. Sanner, M. R. Bouadjenek, and G. Ferraro, **"On Term Selection Techniques for Patent Prior Art Search"**, In *The 38th international ACM SIGIR conference on Research and development in information retrieval (SIGIR)*, 803–806, 2015.
 - 27 M. R. Bouadjenek, S. Sanner, and G. Ferraro, **"A Study of Query Reformulation for Patent Prior Art Search with Partial Patent Applications"**, In *The 15th International Conference on Artificial Intelligence and Law (ICAIL)*, 23–32, 2015.
 - 28 M. R. Bouadjenek, H. Hacid, and M. Bouzeghoub, **"LAICOS: An Open Source Platform for Personalized Social Web Search"**, In *The 19th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 1446–1449, 2013.
 - 29 M. R. Bouadjenek, H. Hacid, M. Bouzeghoub, and A. Vakali, **"Using social annotations to enhance document representation for personalized search"**, In *The 36th international ACM SIGIR conference on Research and development in information retrieval (SIGIR)*, 1049–1052, 2013.
 - 30 M. R. Bouadjenek, H. Hacid, and M. Bouzeghoub, **"SoPra: a new social personalized ranking function for improving web search"**, In *The 36th international ACM SIGIR conference on Research and development in information retrieval (SIGIR)*, 861–864, 2013.
 - 31 M. R. Bouadjenek, A. Bennamane, H. Hacid, and M. Bouzeghoub, **"Evaluation of personalized social ranking functions of information retrieval"**, In *The 13th International Conference on Web Engineering (ICWE)*, 283–290, 2013.
 - 32 M. R. Bouadjenek, H. Hacid, M. Bouzeghoub, and J. Daigremont, **"Personalized social query expansion using social bookmarking systems"**, In *The 34th international ACM SIGIR conference on Research and development in Information Retrieval (SIGIR)*, 1113–1114, 2011.
 - 33 Y. Lassoued, M.R. Bouadjenek, O. Boucelma, F. Lemos, and M. Bouzeghoub, **"GQBox: geospatial data quality assessment"**, In *The 18th SIGSPATIAL International Conference on Advances in Geographic Information Systems (GIS)*, 534–535, 2010.

Supervision	Postdoctoral Researchers	
	<ul style="list-style-type: none"> • Zafaryab Rasool, <i>Unsupervised Machine Learning for Clustering Heterogenous Data</i> (post-doc at Deakin University; June 2021-June 2022) 	
	PhD Students	
	<ul style="list-style-type: none"> • Ngoc Dung Huynh, <i>Understanding Linguistic Feature Encoding in Transformers for Multilingual Question Answering Systems</i> (Deakin University, graduates 2025+) • Zeeshan Khan, <i>Investigating New Deep Learning Models for Visual Question Answering</i> (Deakin University, graduates 2024+) • Tanya Boone-Sifuentes, <i>Investigating Multi-level Hierarchical Classification Algorithms</i> (Deakin University, graduates 2023+) • Shashank Gupta, <i>Logic Rule Dissemination Consistency Assessment in Sentiment Classification</i> (Deakin University, graduates 2023+) 	
	Masters Students	
	<ul style="list-style-type: none"> • Ngoc Dung Huynh, <i>Speech-to-CDQL: Context Definition and Query Language from Natural Language for Smart Home Environment</i> (Deakin University, graduated 2022) • Yihao Du, <i>Relevance-driven Clustering Methods for Visual Interactive Search</i> (Deakin University, graduated 2019) 	
Event Organization	<ul style="list-style-type: none"> • ICSOC 2021 Workshop Co-Chairs; Dubai, UAE • ICSOC 2020 Tutorial/Panel Co-Chairs; Dubai, UAE • Deakin Simpsons Challenge 2022 • Deakin Simpsons Challenge 2021 	
Professional Activities	Journal Reviewing <ul style="list-style-type: none"> • Knowledge and Information Systems • Information Retrieval Journal • Information Processing & Management • Neurocomputing Journal • Artificial Intelligence Journal 	
	Conference Program Committees <ul style="list-style-type: none"> • International Conference on Web Information Systems Engineering (WISE) (2018, 2021, 2022) • ACS/IEEE International Conference on Computer Systems and Applications AICCSA (2022) • Association for the Advancement of Artificial Intelligence (AAAI) (2019) • IEEE International Workshop on Machine Learning for Signal Processing (2021) 	
Courses Taught	Human Alligned AI , Deakin University. Introduction to Programming , Deakin University. Deep Learning , Deakin University. Research and Developement in IT , Deakin University. Decision Support Systems , University of Toronto. Formal specifications and introduction to UML , UVSQ Conception of Databases , UVSQ	Winter 2020-2022 Fall and Winter 2022 Fall 2020-2021 Fall 20210-2021 Winter 2019 Winter 2011-2012 Winter 2009-2010
References	<ul style="list-style-type: none"> • Prof. Scott Sanner, University of Toronto, Canada: ssanner@mie.utoronto.ca • Prof. Karin Verspoor, RMIT University, Australia: karin.verspoor@rmit.edu.au • Prof. Hakim Hacid, Technology Innovation Institute (TII), UAE: hakim.hacid@tii.ae • Prof. Mokran Bouzeghoub, University Versailles/CNRS, France: mokrane.bouzeghoub@uvsq.fr 	