

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

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<b>Contact</b>	<b>Address:</b> Deakin University, School of Information Technology <b>Office:</b> KA5.201.W26 <b>Campus:</b> Geelong Waurin Ponds Campus 75 Pigdons Rd, Waurin Ponds VIC 3216, Australia <b>Tel:</b> +61 352 278 380 <b>E-mail:</b> rbouadjenek@gmail.com (Perso)   reda.bouadjenek@deakin.edu.au (Pro) <b>WWW:</b> <a href="https://rbouadjenek.github.io/">https://rbouadjenek.github.io/</a>																		
<b>Citizenship</b>	Algerian Citizen; French Citizen; Canadian Permanent Resident; Australian Permanent Resident.																		
<b>Interests</b>	Information Retrieval, Biomedical Text Mining, Social Network Analysis, Machine Learning, Deep Learning, Recommender Systems, Databases, Data Quality, and Data Analysis.																		
<b>Education</b>	<p><b>Deakin University</b>, Geelong, Australia <b>Graduate Certificate</b> of Higher Education for Learning and Teaching (Jun. 2021)</p> <p><b>University of Paris-Saclay</b>, Versailles, France <b>Ph.D.</b>, Computer Science (Dec. 2013) • Supervisors: Mokrane Bouzeghoub and Hakim Hacid • Research Field: <i>Information Retrieval and Machine Learning</i></p> <p><b>University of Paris-Saclay</b>, Versailles, France <b>M.S.</b>, Computer Science (Sep. 2009) • Supervisors: Mokrane Bouzeghoub • Major: <i>Databases and Distributed Information Systems</i></p> <p><b>University of Sciences and Technology Houari Boumediene</b>, Algiers, Algeria <b>B.S.</b>, Computer Science (Jun. 2008) • Major: <i>Databases and Information Systems</i></p>																		
<b>Employment</b>	<table><tr><td><b>Deakin University</b>, Geelong, VIC, Australia. • <i>Lecturer (Assistant Professor)</i>, Applied Artificial Intelligence.</td><td><b>Nov. 2019 – Present</b></td></tr><tr><td><b>University of Toronto</b>, Toronto, ON, Canada. • <i>Research Fellow</i>. Supervisor: Scott Sanner.</td><td><b>Nov. 2017 – Oct. 2019</b></td></tr><tr><td><b>The University of Melbourne</b>, Melbourne, VIC, Australia. • <i>Research Fellow</i>. Supervisor: Karin Verspoor and Justin Zobel.</td><td><b>Sep. 2015 – Sep. 2017</b></td></tr><tr><td><b>Oregon State University</b>, Corvallis, OR, USA. • <i>Visiting Researcher</i>. Supervisor: Scott Sanner.</td><td><b>Jul. 2015 – Aug. 2015</b></td></tr><tr><td><b>INRIA</b>, Montpellier, France. • <i>Postdoc Researcher</i>. Supervisors: Esther Pacitti and Patrick Valduriez.</td><td><b>Jan. 2014 – Jul. 2015</b></td></tr><tr><td><b>UCSB</b>, Santa Barbara, CA, USA. • <i>Visiting Researcher</i>. Supervisor: Amr El Abbadi.</td><td><b>Nov. 2014 – Dec. 2014</b></td></tr><tr><td><b>NICTA</b>, Canberra, ACT, Australia. • <i>Visiting Researcher</i>. Supervisor: Scott Sanner.</td><td><b>Aug. 2013 – Dec. 2013</b></td></tr><tr><td><b>Alcatel-Lucent Bell Labs</b>, Nozay, France. • <i>Research Engineer</i>. Supervisor: Hakim Hacid.</td><td><b>Mar. 2010 – Mar. 2013</b></td></tr><tr><td><b>DAVID Lab</b>, <b>University of Paris-Saclay</b>, Versailles, France. • <i>Master Student Internship</i>. Supervisor: Mokrane Bouzeghoub.</td><td><b>Apr. 2009 – Sep. 2009</b></td></tr></table>	<b>Deakin University</b> , Geelong, VIC, Australia. • <i>Lecturer (Assistant Professor)</i> , Applied Artificial Intelligence.	<b>Nov. 2019 – Present</b>	<b>University of Toronto</b> , Toronto, ON, Canada. • <i>Research Fellow</i> . Supervisor: Scott Sanner.	<b>Nov. 2017 – Oct. 2019</b>	<b>The University of Melbourne</b> , Melbourne, VIC, Australia. • <i>Research Fellow</i> . Supervisor: Karin Verspoor and Justin Zobel.	<b>Sep. 2015 – Sep. 2017</b>	<b>Oregon State University</b> , Corvallis, OR, USA. • <i>Visiting Researcher</i> . Supervisor: Scott Sanner.	<b>Jul. 2015 – Aug. 2015</b>	<b>INRIA</b> , Montpellier, France. • <i>Postdoc Researcher</i> . Supervisors: Esther Pacitti and Patrick Valduriez.	<b>Jan. 2014 – Jul. 2015</b>	<b>UCSB</b> , Santa Barbara, CA, USA. • <i>Visiting Researcher</i> . Supervisor: Amr El Abbadi.	<b>Nov. 2014 – Dec. 2014</b>	<b>NICTA</b> , Canberra, ACT, Australia. • <i>Visiting Researcher</i> . Supervisor: Scott Sanner.	<b>Aug. 2013 – Dec. 2013</b>	<b>Alcatel-Lucent Bell Labs</b> , Nozay, France. • <i>Research Engineer</i> . Supervisor: Hakim Hacid.	<b>Mar. 2010 – Mar. 2013</b>	<b>DAVID Lab</b> , <b>University of Paris-Saclay</b> , Versailles, France. • <i>Master Student Internship</i> . Supervisor: Mokrane Bouzeghoub.	<b>Apr. 2009 – Sep. 2009</b>
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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).
- **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).

**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)*, XXX-XXX, 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)*, XXX-XXX, 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)*, 2022.
- 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. Massegia, 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.

## 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.

Winter 2020-2022  
 Fall and Winter. 2022  
 Fall. 2020-2021  
 Fall. 20210-2021  
 Winter. 2019

## References

- Prof. Scott Sanner, University of Toronto: ssanner@mie.utoronto.ca
- Prof. Karin Verspoor, RMIT University: karin.verspoor@rmit.edu.au
- Prof. Hakim Hacid , Zayed University: hakim.hacid@zu.ac.ae
- Prof. Mokran Bouzeghoub, University Versailles: mokrane.bouzeghoub@uvsq.fr