

CURRICULUM VITAE

Malak A. Abdullah, Associate Professor

Jordan University of Science and Technology

Computer Science Department

Webpage: <https://sites.google.com/view/malak-abdullah/home>

<https://www.just.edu.jo/eportfolio/Pages/Default.aspx?email=mabdullah&csr=3568565107929459361>

Phone: (+962) 2-7201000-22891

Email: mabdullah@just.edu.jo

dr.malak.abdelghani@gmail.com

W.P. Kinsella once said, "Success is getting what you want; happiness is wanting what you get." I believe I achieved success and happiness when I decided to study in the field of computer science. I am currently the head of the Computer Science department as well as an associate professor at Jordan University of Science and Technology (JUST), Jordan. I received my BSc and MSc degrees in computer science with EXCELLENT GPAs from JUST. Thus, I was awarded a scholarship to pursue a Ph.D. at the University of North Carolina at Charlotte, USA. As a faculty member in the computer science department, I have taught 20 bachelor's and master's degree courses for all levels. The courses include artificial intelligence, machine learning, data science, C++, Java, object-oriented, data structures and algorithms, and others. I have supervised 11 master's students' theses and 12 graduation projects. My research interests center around Machine Learning, Sentiment Analysis, Programming Languages, Data Mining, Natural Language Processing, Algorithms, Deep Learning, and Artificial Intelligence. I published over 35 papers in reputable academic journals, conferences, and workshops. Furthermore, I was and still am a member of several university-level committees. In addition, I served as a Vice director, Deputy Head of the Information Technology & Communications Center at JUST from 2019-2020. I coached several programming teams at JUST to give them the appropriate guidance and direction in every aspect of their education. I traveled as a coach with my teams to different countries to participate in the ACM programming contests of the Arab Collegiate Programming Contest (ACPC). As a Jordanian woman in computing, I greatly support female students' involvement in this field and encourage them to participate in programming contests. Finally, Alhamdulillah, all Praise and thanks are due to Allah, who proclaimed, "If you give thanks, I will give you more; but if you are ungrateful, my punishment is severe." Quran 14:7.

EDUCATION

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| Doctor of Philosophy, Computer Science
The University of North Carolina at Charlotte (UNCC), NC, USA
Dissertation: Deep Learning for Sentiment and Emotion Detection
In Multilingual Contexts. | 2018 |
| Master of Science, Computer Science
Jordan University of Science and Technology (JUST), Irbid, Jordan
Thesis: The Chained-Cubic Tree: A New Interconnection Network.
<i>With honors (ranked first)</i> | 2007 |
| Bachelor of Science, Computer Science and Information Systems
Jordan University of Science and Technology (JUST), Irbid, Jordan
<i>With honors</i> | 2004 |

PROFESSIONAL EXPERIENCE

- Associate Professor** 2023 – Present
Jordan University of Science and Technology
Computer science Department
- Chair of the Department of Computer Science** 2022 – Present
Jordan University of Science and Technology
Faculty Of Computer & Information Technology
- Deputy Director of Center, Vice Director, Sep 2019 - Sep 2020** 2019 – 2020
Jordan University of Science and Technology
Information Technology and Communication Center (ITCC)
- Assistant Professor** 2018 – 2023
Jordan University of Science and Technology
Computer science Department
- Graduate Research Assistantship** 2017 –2018
The University of North Carolina at Charlotte
- Graduate Teaching Assistantship** 2016 –2017
The University of North Carolina at Charlotte
- TA for Network-Based Application Development ITIS 5166 (Spring-2016)
 - TA for Data Structures and Algorithms ITSC 2214-101 (Fall-2016)
 - TA for Introduction to Operating Systems and Networking ITSC 3146 (Spring-2017)
- Full-Time Instructor** 2007 –2014
Jordan University of Science and Technology (JUST)
- Taught computer science and information systems courses at the undergraduate level:
 - **First Year Courses:** Computer Skills, Introduction to Computer Science (C++ language), Introduction to Computer Science Lab (C++ language), Object Oriented Programming Languages, Object Oriented Programming Languages Lab, C++ for non-computer science students, and Visual Basic for non-computer science students.

- **Second Year Courses:** Algorithms and Data structures, Web Design, Data Structures lab, and Java Programming language.
- **Fourth-Year Courses:** Programming Challenges and Expert Systems.
- Coached JUST teams for ACM programming competitions. 2011- 2014
 - Trained teams for local and global competitions.
 - Organized team meetings and training sessions.
 - Volunteered to teach C++ programming.
 - Evaluated and reported team performance and results.

Graduate Teaching Assistant 2005 – 2007

Jordan University of Science and Technology (JUST)

- Assisted with conducting and grading the labs for computer science courses, including: computer skills, Compilers, and computer architecture.
- Worked on a parallel processing research project to study and develop interconnection networks.
- Organized help sessions for students on visual basic and C++ programming.

Computer Lab Supervisor 2004 – 2005

Zarqa Private University, Jordan

- Supervised computer labs and ensured the periodical maintenance of lab software.
- Designed posters and brochures for the school.
- Served as an administrative clerk for the Arab Conference on Information Technology (ACIT) and The International Arab Conference on Information Technology (IAJIT).

HONORS AND AWARDS

Scholarship Award for Ph.D. Degree at UNCC 2015 – 2018
Jordan University of Science and Technology, Irbid, Jordan

ACM Jordan Collegiate Programming Contest (JCPC) Awards for Coaches 2011 – 2015
Jordan University of Science and Technology, Irbid, Jordan

Ranked with *highest* student evaluation in Computer Science Department 2008 – 2014
Jordan University of Science and Technology, Irbid, Jordan

Jordan University of Science and Technology Graduate Fellowship 2005 – 2007
Jordan University of Science and Technology, Irbid, Jordan

TECHNICAL SKILLS

- Excellent knowledge of Windows, Mac OS, and MS Office (2000, NT, XP, 2010, 2013).
- Programming skills in Java, R, Python, PHP, JSP, Servlets, C++, Oracle, Visual Basic, and HTML.
- Good Knowledge of Scripting using JavaScript Language (DHTML).

LANGUAGES

- Arabic (Mother language)
- English (reading, writing, speaking).

RESEARCH INTERESTS

Data Science, Social Network Analysis, and Natural Language processing

Sentiment analysis of Twitter (English/Arabic) feeds to analyze the general decision impact on people

Complex Adaptive System

Studying how parts of a system give rise to the collective behaviors of the system, and how the system interacts with its environment.

Parallel Computing

Proposition and analysis of a new interconnection network, referred to as the Chained-Cubic Tree interconnection network (CCT)

COMMUNITY SERVICES

IEEE Robotics and Automation Society Advisor

2023

IEEE Computer Society Advisor

2023

Programming Camp at Jordan University of Science and Technology (JUST)

2014

Coordinated and supervised a training camp inside the university to train students for international programming contests.

Honoring Ceremony for Janitors at Jordan University of Science and Technology (JUST)

2013

Planned and coordinated a ceremony to honor all janitors working at the School of Information Technology.

PUBLICATIONS

Abdullah, Malak, Mahmoud Al-Ayyoub, Farah Shatnawi, Saif Rawashdeh, and Rob Abbott. "Predicting students' academic performance using e-learning logs." IAES International Journal of Artificial Intelligence 12, no. 2 (2023): 831

Abdullah, M., Abujaber, D., Al-Qarqaz, A., Abbott, R. and Hadzikadic, M., 2023. Combating propaganda texts using transfer learning. IAES International Journal of Artificial Intelligence, 12(2), p.956

Obeidat, R., Gharaibeh, **M., Abdullah**, M. and Alharahsheh, Y., 2022. Multi-label multi-class COVID-19 Arabic Twitter dataset with fine-grained misinformation and situational information annotations. *PeerJ Computer Science*, 8, p.e1151.

Alzu'bi, D., **Abdullah**, **M.**, Hmeidi, I., AlAzab, R., Gharaibeh, M., El-Heis, M., Almotairi, K.H., Forestiero, A., Hussein, A.M. and Abualigah, L., 2022. Kidney Tumor Detection and Classification Based on Deep Learning Approaches: A New Dataset in CT Scans. *Journal of Healthcare Engineering*, 2022.

Shatnawi, F., **Abdullah**, **M.**, Hammad, M. and Al-Ayyoub, M., 2022. Comprehensive study of pre-trained language models: detecting humor in news headlines. *Soft Computing*, pp.1-25.

Abdullah, **M.**, Alnore, D., Swedat, S., Khrais, J. and Al-Ayyoub, M., 2022, July. SarcasmDet at SemEval-2022 Task 6: Detecting Sarcasm using Pre-trained Transformers in English and Arabic Languages. In *Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval-2022)* (pp. 1025-1030).

Habash, M., Daqour, Y., **Abdullah**, **M.** and Al-Ayyoub, M., 2022, July. YMAI at SemEval-2022 Task 5: Detecting Misogyny in Memes using VisualBERT and MMBT MultiModal Pre-trained Models. In *Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval-2022)* (pp. 780-784).

Makahleh, M., Yaseen, N.B. and **Abdullah**, **M.**, 2022, July. JUST-DEEP at SemEval-2022 Task 4: Using Deep Learning Techniques to Reveal Patronizing and Condescending Language. In *Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval-2022)* (pp. 308-312).

Ali, H.H., **Abdullah**, **M.** & Wedyan, M. Application of machine learning techniques to predict patient's satisfaction of indoor environmental quality in Jordanian hospitals. *J Ambient Intell Human Comput* (2022). <https://doi.org/10.1007/s12652-022-04021-6>

Abdullah, **M.**, Altit, O., & Obiedat, R. (2022, June). Detecting Propaganda Techniques in English News Articles using Pre-trained Transformers. In *2022 13th International Conference on Information and Communication Systems (ICICS)* (pp. 301-308). IEEE.

Gharaibeh, M., Alzu'bi, D., **Abdullah**, **M.**, Hmeidi, I., Al Nasar, M. R., Abualigah, L., & Gandomi, A. H. (2022). Radiology imaging scans for early diagnosis of kidney tumors: a review of data analytics-based machine learning and deep learning approaches. *Big Data and Cognitive Computing*, 6(1), 29.

Abdullah, **M.**, Alnore, D., Swedat, S., Khrais, J., & Al-Ayyoub, M. (2022, July). SarcasmDet at SemEval-2022 Task 6: Detecting Sarcasm using Pre-trained Transformers in English and Arabic Languages. In *Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval-2022)* (pp. 1025-1030).

Habash, M., Daqour, Y., **Abdullah**, **M.**, & Al-Ayyoub, M. (2022, July). YMAI at SemEval-2022 Task 5: Detecting Misogyny in Memes using VisualBERT and MMBT MultiModal Pre-trained Models. In *Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval-2022)* (pp. 780-784).

Makahleh, M., Yaseen, N. B., & **Abdullah, M.** (2022, July). JUST-DEEP at SemEval-2022 Task 4: Using Deep Learning Techniques to Reveal Patronizing and Condescending Language. In *Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval-2022)* (pp. 308-312).

Alshare, S., **Abdullah, M.**, & Quwaider, M. (2022, June). Increasing Accuracy of Random Forest Algorithm by Decreasing Variance. In *2022 13th International Conference on Information and Communication Systems (ICICS)* (pp. 232-238). IEEE.

Gharaibeh, M., Obeidat, R., **Abdullah, M.**, & Al-Harabsheh, Y. (2022, June). Datasets and Approaches of COVID-19 Misinformation Detection: A Survey. In *2022 13th International Conference on Information and Communication Systems (ICICS)* (pp. 337-345). IEEE.

Wedyan, M., Ali, H., & **Abdullah, M.** (2022, June). Toward Predicting Patient's Satisfaction of Indoor Environmental Quality in Jordanian Hospitals using SVM and K-NN Machine Learning Algorithms. In *2022 13th International Conference on Information and Communication Systems (ICICS)* (pp. 239-245). IEEE.

Abdullah, M., Khrais, J., & Swedat, S. (2022, June). Transformer-Based Deep Learning for Sarcasm Detection with Imbalanced Dataset: Resampling Techniques with Downsampling and Augmentation. In *2022 13th International Conference on Information and Communication Systems (ICICS)* (pp. 294-300). IEEE.

Abdullah, M., Al-Ayyoub, M., AlRawashdeh, S., & Shatnawi, F. (2021). "E-learningDJUST: E-learning dataset from Jordan university of science and technology toward investigating the impact of COVID-19 pandemic on education". *Neural Computing and Applications*, 1-15

Yaseen, Tuqa Bani, Qusai Ismail, Sarah Al-Omari, Eslam Al-Sobh, and **Malak Abdullah**. "JUST-BLUE at SemEval-2021 Task 1: Predicting Lexical Complexity using BERT and RoBERTa Pre-trained Language Models." In *Proceedings of the 15th International Workshop on Semantic Evaluation (SemEval-2021)*, pp. 661-666. 2021.

Faraj, Dalya, and **Malak Abdullah**. "SarcasmDet at SemEval-2021 Task 7: Detect Humor and Offensive based on Demographic Factors using RoBERTa Pre-trained Model." In *Proceedings of the 15th International Workshop on Semantic Evaluation (SemEval-2021)*, pp. 527-533. 2021.

Abujaber, Dia, Ahmed Qarqaz, and **Malak A. Abdullah**. "LeCun at SemEval-2021 Task 6: Detecting Persuasion Techniques in Text Using Ensembled Pretrained Transformers and Data Augmentation." In *Proceedings of the 15th International Workshop on Semantic Evaluation (SemEval-2021)*, pp. 1068-1074. 2021.

Abedalla, Ayat, **Malak Abdullah**, Mahmoud Al-Ayyoub, and Elhadj Benkhelifa. "Chest X-ray pneumothorax segmentation using U-Net with EfficientNet and ResNet architectures." *PeerJ Computer Science* 7 (2021): e607.

Qarqaz, Ahmed, Dia Abujaber, and **Malak Abdullah**. "R00 at NLP4IF-2021 fighting COVID-19 infodemic with transformers and more transformers." In *Proceedings of the Fourth Workshop on NLP for Internet Freedom: Censorship, Disinformation, and Propaganda*, pp. 104-109. 2021.

Qarqaz, Ahmed, and **Malak A. Abdullah**. "Team R00 at Mowjaz Multi-Topic Labelling Task for Arabic Articles." In *2021 12th International Conference on Information and Communication Systems (ICICS)*, pp. 462-465. IEEE, 2021.

Alharahsheh, Yara E., and **Malak A. Abdullah**. "Predicting Individuals Mental Health Status in Kenya using Machine Learning Methods." In *2021 12th International Conference on Information and Communication Systems (ICICS)*, pp. 94-98. IEEE, 2021.

Altiti, Ola, **Malak Abdullah**, and Rasha Obiedat. "JUST at SemEval-2020 task 11: Detecting propaganda techniques using BERT pre-trained model." In *Proceedings of the Fourteenth Workshop on Semantic Evaluation*, pp. 1749-1755. 2020.

Shatnawi, Fara, **Malak Abdullah**, and Mahmoud Hammad. "MLEngineer at SemEval-2020 task 7: BERT-flair based humor detection model (BFHumor)." In *Proceedings of the Fourteenth Workshop on Semantic Evaluation*, pp. 1041-1048. 2020.

Al-Khdour, Nour, Mutaz Bni Younes, **Malak Abdullah**, and AL-Smadi Mohammad. "JUSTMasters at SemEval-2020 Task 3: Multilingual deep learning model to predict the effect of context in word similarity." In *Proceedings of the Fourteenth Workshop on Semantic Evaluation*, pp. 292-300. 2020.

Mohammed, Roweida, and **Malak Abdullah**. "Teamjust at semeval-2020 task 4: Commonsense validation and explanation using ensembling techniques." In *Proceedings of the Fourteenth Workshop on Semantic Evaluation*, pp. 594-600. 2020.

AlRashdan, Mohammed N., **Malak Abdullah**, Mahmoud Al-Ayyoub, and Yaser Jararweh. "Authorship analysis of English and Spanish tweets." *Proceedings of the Association for Information Science and Technology* 57, no. 1 (2020): e261.

Abedalla, Ayat, **Malak Abdullah**, Mahmoud Al-Ayyoub, and Elhadj Benkhelifa. "2st-unet: 2-stage training model using u-net for pneumothorax segmentation in chest x-rays." In *2020 International Joint Conference on Neural Networks (IJCNN)*, pp. 1-6. IEEE, 2020.

Mohammed, Roweida, Jumanah Rawashdeh, and **Malak Abdullah**. "Machine learning with oversampling and undersampling techniques: overview study and experimental results." In *2020 11th international conference on information and communication systems (ICICS)*, pp. 243-248. IEEE, 2020.

Al-Omari, Hani, **Malak A. Abdullah**, and Samira Shaikh. "Emodet2: Emotion detection in english textual dialogue using bert and bilstm models." In *2020 11th International Conference on Information and Communication Systems (ICICS)*, pp. 226-232. IEEE, 2020.

O ElTayeby, T Eaglin, **M Abdullah**, D Burlinson, W Dou, L Yao, "A feasibility study on identifying drinking-related contents in Facebook through mining heterogeneous data", *Health informatics journal* 25 (4), 1756-1767, 2019

Malak Abdullah, Mirsad Hadzikadic, and Samira Shaikh. "SEDAT: Sentiment and Emotion Detection in Arabic Text using CNN-LSTM Deep Learning", *Proceedings of the 17th IEEE International Conference on Machine Learning And Applications*, 2018

ElTayeby, Omar, Todd Eaglin, **Malak Abdullah**, David Burlinson, Wenwen Dou, and Lixia Yao. "A feasibility study on identifying drinking-related contents in Facebook through mining heterogeneous data" In *Health informatics journal*: 1460458218798084. 2018

Malak Abdullah, and Samira Shaikh. "TeamUNCC at SemEval-2018 Task 1: Emotion Detection in English and Arabic Tweets using Deep Learning", Proceedings of the 12th International Workshop on Semantic Evaluation, 350-357, 2018

Malak Abdullah, and Mirsad Hadzikadic. "Sentiment Analysis of Twitter Data: Emotions Revealed Regarding Donald Trump during the 2015-16 Primary Debates", Tools with Artificial Intelligence (ICTAI), 2017 IEEE 29th International Conference on. IEEE, 2017.

Malak Abdullah, and Mirsad Hadzikadic. "Sentiment Analysis on Arabic Tweets: Challenges to Dissecting the Language." In International Conference on Social Computing and Social Media, pp. 191-202. Springer, Cham, 2017

ElTayeby, Omar, Todd Eaglin, **Malak Abdullah**, David Burlinson, Wenwen Dou, and Lixia Yao. "Detecting Drinking-Related Contents on Social Media by Classifying Heterogeneous Data Types." In International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, pp. 364-373. Springer, Cham, 2017.

M. Abdullah, E. Abuelrub, and B. Mahafzah, "The Chained-Cubic Tree: A New Interconnection Network", The International Arab Journal of Information Technology (IAJIT), vol. 8, no. 3, Jul. 2011.

M. Abdullah, "The Chained-Cubic Tree: A New Interconnection Network (Master Thesis)", Jordan University of Science and Technology (JUST), Irbid, Jordan, 2007.