

## Hassan Mohammad Najadat

Professor of Data Science  
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### BRIEF BIOGRAPHY

I am a professor of data science at Jordan University of Science and Technology (JUST). My research interests include data science, with a focus on data analytics, machine learning, and data engineering. I emphasize applying various analytical approaches to solving real-world problems across different fields. I teach a range of data science courses, including data mining, databases systems, data analytics, data engineering, and artificial intelligence. I received my Ph.D. in Computer Science from North Dakota State University, ND, USA, in 2005. I joined the university (JUST) as an assistant professor of Computer Science in 2005 and became an associate professor in 2011. From the fall of 2011 to the spring of 2014, I served as a visiting professor in the Department of Computer Science at Taif University, KSA. Additionally, I spent the academic year 2020/2021 at the Department of Data Science at Princess Sumaya University for Technology in Jordan on sabbatical leave.

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### EDUCATION

- Ph.D. in CS, North Dakota State University (NDSU), USA, May 13, 2005
- MS. in CS, University of Jordan, JORDAN, June 20, 1999
- BS in CS Mut'ah University, JORDAN, May 9, 1993

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### ACADEMIC APPOINTMENTS

- Professor, Department of Computer Information Systems, Jordan University of Science and Technology (JUST) Jordan, 10th Jan. 2022.
- Associate Professor, Data Science Department, Princess Sumaya University for Technology (PSUT), Amman, Jordan.9/20 – 9/21.
- Associate Professor, Department of Computer Information Systems, Jordan University of Science and Technology (JUST) Jordan, June 2011 to 9/1/2022.
- Associate Professor, Department of Computer Science, Taif University, Taif, KSA, Sabbatical Leave at Taif University , June 2011 – 9/1/2022.
- Assistant Professor, Department of Computer Information Systems, Jordan University of Science and Technology (JUST) Jordan, Jul. 05 to Jun. 2011.
- Lecturer, Department of Computer Science and Information Systems, Jordan University of Science and Technology (JUST) Jordan, Jan. 2000- Feb. 200
- Teaching Assistant, Department of Computer Science, North Dakota State University (NDSU), USA, 9/2003 – 5/2005.

- Lab Computer Supervisor, Yarmouk University, Irbid, Jordan. Oct. 5, 95 to Oct. 99
- Programmer, Jordan Customs, Ministry of Finance, Jordan. Jordan Customs, Ministry of Finance, Jordan. 10/94-1-95

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## PRINCIPLE PUBLICATIONS

1. Amjad Albashayreh, Hassan Najadat, "Detecting the Impact of COVID-19 on Social Media using BERT-Based Model", accepted to be published in the proceeding of 15th International Conference on Information and Communication Systems, 2024.
2. Hamzeh Hailat, Ahmad Mustafa, Hassan Najadat, Mamoon Alomari and Sofyan Freihat, "Addressing the Imbalanced Class Distribution in Fatty Liver Detection in CT Images Using Transfer Learning", accepted to be published in the proceeding of 15th International Conference on Information and Communication Systems, 2024.
3. Saja Nakhleh, Ahmad M. Mustafa, Hassan Najadat, "AraT5GQA: Arabic Question Answering model using automatic generated dataset", accepted to be published in the proceeding of 15th International Conference on Information and Communication Systems, 2024.
4. Mo'ath Zyout, Raed Shatnawi, Hassan Najadat, "Malware classification approaches utilizing binary and text encoding of permissions". *International Journal of Information Security*. (2023). <https://doi.org/10.1007/s10207-023-00712-z>
5. T. Sha'ban, H. Hailat, A. Nawafleh and H. Najadat, "Assessing the Effectiveness of COVID-19/SARS-CoV-2 Vaccinations in Terms of Mortality Rates," 2023 14th International Conference on Information and Communication Systems (ICICS), Irbid, Jordan, 2023, pp. 1-6, doi: 10.1109/ICICS60529.2023.10330502.
6. R. O. Irsheidat, S. Nakhleh, R. M. Alruosan and H. Najadat, "Utilizing Machine Learning Techniques to Predict Adverse Reactions to COVID-19 Vaccines in Individuals with Allergies," 2023 14th International Conference on Information and Communication Systems (ICICS), Irbid, Jordan, 2023, pp. 1-6, doi: 10.1109/ICICS60529.2023.10330537.
7. Ibrahim Al-Jarrah, Ahmad M. Mustafa, Hassan Najadat, "Aspect-Based Sentiment Analysis for Arabic Food Delivery Reviews", 2023, *ACM Transactions on Asian and Low-Resource Language Information Processing*, 22(7), pp 1–18. <https://doi.org/10.1145/3605146>
8. Al-Ibrahim, Roqayah M. and Ali, Mostafa Z. and Najadat, Hassan M., "Detection of Hateful Social Media Content for Arabic Language", 2023, *ACM Trans. Asian Low-Resource Language Inf. Process* <https://doi.org/10.1145/3592792>.
9. Al-Shboul, A., Gharibeh, M., Najadat, H., Ali, M., El-Heis, M., "Overview of convolutional neural networks architectures for brain tumor segmentation", *International Journal of Electrical and Computer Engineering*, 2023, 13(4), pp. 4594–4604.
10. Najadat, H., Tawalbeh, M., Awawdeh, R. "Fake news detection for Arabic headlines-articles news data using deep learning", *International Journal of Electrical and Computer Engineering*, 2022, 12(4), pp. 3951–3959.
11. T. Alsmadi, N. Alqudah and H. Najadat, "Prediction of Covid-19 patients states using Data mining techniques," 2021 *International Conference on Information Technology (ICIT)*, Amman, Jordan, 2021, pp. 251-256, doi: 10.1109/ICIT52682.2021.9491716.
12. M. Alzyout, E. AL Bashabsheh, H. Najadat and A. Alaiad, "Sentiment Analysis of Arabic Tweets about Violence Against Women using Machine Learning," 2021 *12th International Conference on Information and Communication Systems (ICICS)*, Valencia, Spain, 2021, pp. 171-176, doi: 10.1109/ICICS52457.2021.9464600
13. S. Shurrab, Y. Shannak, A. Almshnanah, H. Khazaleh and H. Najadat, "Attitudes Evaluation Toward COVID-19 Pandemic: An Application of Twitter Sentiment Analysis and Latent Dirichlet Allocation," 2021 *12th International Conference on Information and Communication Systems (ICICS)*, Valencia, Spain, 2021, pp. 265-272, doi: 10.1109/ICICS52457.2021.9464558.
14. Hassan Najadat, Mohammad A. Alzubaidi, and Islam Qarqaz. 2021. Detecting Arabic Spam Reviews in Social Networks Based on Classification Algorithms. *ACM Trans. Asian Low-Resource Language Inf. Process.* 21, 1, Article 11 (January 2022), 13 pages. DOI:<https://doi.org/10.1145/3476115>. (Scopus: Q2, IF:1.86)

15. Amal Alzu'bi, Hassan Najadat, "A New Approach for Detecting Eosinophils in the Gastrointestinal Tract and Diagnosing Eosinophilic Colitis", *The International Arab Journal of Information Technology*, Vol. 18, No. 4, July 2021. (Scopus: Q2, IF:0.7)
16. Alzu'bi, A., Najadat, H., Doulat, W. et al. Predicting the recurrence of breast cancer using machine learning algorithms. *Multimedia Tools Application-* vol. 80, 13787–13800 (2021). <https://doi.org/10.1007/s11042-020-10448-w> ((Scopus: Q2, IF:2.3)
17. Al-Hawari, A., Najadat, H. & Shatnawi, R. Classification of application reviews into software maintenance tasks using data mining techniques. *Software Quality Journal* 29, 667–703 (2021).a
18. Hassan Mohammad Najadat, Mais Tawalbeh, Rasha Awawdeh, "Fake News Detection for Arabic Headlines-Articles News Data Using Deep Learning" *International Journal of Electrical and Computer Engineering (IJECE)*, Vol.12, No.4, August 2022, pp. 3951~3959. (Scopus: Q2)
19. Hassan Najadat, Ibrahim Al-Daher, Khaled Alkhatib, "Performance Evaluation of Industrial Firms Using DEA and DECORATE Ensemble Method", *International Arab Journal of Information Technology*, vol. 17, no. 5, 2020. (Scopus: Q2, IF:0.7)
20. Hassan Najadat, Amer Al-Badarneh, Sawsan Alodibat, "A Review of Website Evaluation Using Web Diagnostic Tools and Data Envelopment Analysis", *Bulletin of Electrical Engineering and Informatics (BEEI)*, Vol 10, No 1: February 2021. (Scopus: Q2)
21. H. M. Najadat, A. A. Alzu'bi, F. Shatnawi, S. Rawashdeh and W. Eyadat, "Analyzing Social Media Opinions Using Data Analytics," *2020 11th International Conference on Information and Communication Systems (ICICS)*, Irbid, Jordan, 2020, pp. 266-271, doi: 10.1109/ICICS49469.2020.239497.
22. H. Najadat, O. Altit, A. A. Aqouleh and M. Younes, "Credit Card Fraud Detection Based on Machine and Deep Learning," *2020 11th International Conference on Information and Communication Systems (ICICS)*, Irbid, Jordan, 2020, pp. 204-208, doi: 10.1109/ICICS49469.2020.239524.
23. H. Najadat, Q. Althebyan and Y. Al-Omary, "Higher Education Units Assessment Based on Data Envelopment Analysis and Clustering Techniques," *2019 International Arab Conference on Information Technology (ACIT)*, Al Ain, United Arab Emirates, 2019, pp. 171-177.
24. H. Najadat, A. Badarneh and S. Alodibat, "A Hybrid Model of Ensemble Method and Data Envelopment Analysis (DEA) for E-government Websites Efficiency Evaluation," *2019 International Arab Conference on Information Technology (ACIT)*, Al Ain, United Arab Emirates, 2019, pp. 182-187.
25. I. Hmiedi, H. Najadat, Z. Halloush and I. Jalabneh, "Semi Supervised Prediction Model in Educational Data Mining," *2019 International Arab Conference on Information Technology (ACIT)*, Al Ain, United Arab Emirates, 2019, pp. 27-31.
26. Hassan Najadat, Ahmad Alaiad, Sanaa Abu Alasal, Ghadeer Mrayyan, Izzat Alsmadi, Integration of Data Envelopment Analysis and Clustering Methods, *Journal of Knowledge Management submission system (JIKM)*, vol. 19, no. 1, 2020. (Scopus: Q2)
27. Ahmad Alaiad, Hassan Najadat, Belal Mohsen, Khaled Balhaf, Classification and association-rule mining technique for predicting chronic kidney disease, *Journal of Knowledge Management submission system (JIKM)*, , vol. 19, no. 1, 2020. (Scopus: Q2)
28. Hassan M. Najadat ; Ahmad A. Alshboul ; Abdullah F. Alabed, Arabic Handwritten Characters Recognition using Convolutional Neural Network, *10th International Conference on Information and Communication Systems (ICICS)*, Jordan, 2019.
29. Ahmad Alaiad ; Hassan Najadat ; Nusaiba Al-Mnayyis ; Ashwaq Khalil, Associative Classification of the Jordanian Hospitals Efficiency Based on DEA, *IEEE Conference on Big Data and Analytics (ICBDA)*, Langkawi Island, Malaysia, 2018.
30. Hassan Najadat ; Amnah Al-Abdi ; Yasmeen Sayaheen, Model-based sentiment analysis of customer satisfaction for the Jordanian telecommunication companies, *9th International Conference on Information and Communication Systems (ICICS)*, Jordan, 2018.
31. Hassan Najadat and Ftoon Abushaqra, "Multimodal Sentiment Analysis of Arabic Videos," *Journal of Image and Graphics*, Vol. 6, No. 1, pp. 39-43, June 2018. doi: 10.18178/joig.6.1.39-43.

32. Hassan Najadat, Qutaibah Althebyan, Abedallah Khamaiseh, Mohammad Al-Saad and Ahmad Al Rawashde, "Efficiency Analysis of Health Care Centers Using Data Envelopment Analysis", *The International Journal of E-Learning and Educational Technologies in the Digital Media (IJEETDM)*, 4(1), 2018.
33. Hassan Najadat ; Amer Al-Badarneh ; Rasha Al-Huthaifi ; Assia Abo-Zaitoon ; Yasmin Al-Omary, Evaluating Jordanian universities' websites based on data envelopment analysis, 8th International Conference on Information and Communication Systems (ICICS), Irbid, Jordan, 2017.
34. Amer Al-Badarneh ; Hassan Najadat ; Salah Rababah, Performance evaluation of bloom filter size in map-side and reduce-side bloom joins, 8th International Conference on Information and Communication Systems (ICICS), Irbid, Jordan, 2017.
35. Hassan Najadat, Assem Alhawari, Huthifh Al\_Rushdan, "Data Mining Classification Approaches for Malicious Executable File Detection", (CSCEET 2017), Beirut, Lebanon, 2017.
36. Hassan Najadat, Qutaibah Althebyan, Abedallah Khamaisehy, Mohammad Al-Saady and Ahmad Al Rawashdehy, "Efficiency Analysis of Health Care Centers Using Data Envelopment Analysis", (CSCEET 2017), Beirut, Lebanon, 2017.
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38. Amer Al-Badarneh, Hassan Najadat, Salah Rababah, "Performance Evaluation of Bloom Filter Size in Mapside and Reduce-side Bloom Joins", 8<sup>th</sup> ICICS, Irbid, Jordan, 2017.
39. Hassan Najadat, Nawaf Abdulla, Raddad Abooraig, Shehabeddin Nawasrah, "Spam Detection for Mobile Short Messaging Service Using Data Mining Classifiers", *International Journal of Computer Science and Information Security*, 14(8), pp. 511-517, 2016.
40. Amer Al-Badarneh ; Hassan Najadat ; Majd Al-Soud ; Rasha Mosaid, Phoenix: A MapReduce implementation with new enhancements, 7th International Conference on Computer Science and Information Technology (CSIT), Turkey, 2016.
41. Hassan Najadat, Amer Al-Badarneh, Huda Qawasmi, "Accreditation Software for Higher Education Programs", 15<sup>th</sup> ITHET, Istanbul, Turkey, 2016.
42. Amer Al-Badarneh, Amnah Al- Abdi, Sana'a M. Al-Shboul, Hassan Najadat, "Survey of Similarity Join Algorithms based on MapReduce", *MATTER: International Journal of Science and Technology*, 2(1), 214-234, 2016.
43. Amer Al-Badarneh, Mohammed Al-Rudaini, Faisal Ali, Hassan Najadat, "Index-Based Join in MapReduce Using Hadoop Map Files", *MATTER: International Journal of Science and Technology*, 2(1), 200-213, 2016.
44. Amer Al-Badarneh, Ghaith Husari, Hassan Najadat, "A Model for Managing Medical Image Data on the Cloud", *LIFE: International Journal of Health and Life-Sciences*, 2(3), 18-25, 2016.
45. Amer Al-Badarneh, Hassan Najadat, Majd Al-Soud, Rasha Al-Huthaifi, "Phoenix: A MapReduce Implementation with New Enhancements", *Proceedings of 7th International Conference on Computer Science and Information Technology (CSIT)*, 2016.
46. Amer Al-Badarneh, Hassan Najadat, Nawaf Abdulla, Abdalrhman Almodawar, Ghassan Mohsen, "A Survey of Indexing Schemes in Cloud Data Management", *Proceedings of 7th International Conference on Computer Science and Information Technology (CSIT)*, 2016.
47. Mohammed I. Khaleel, Ismail I. Hmeidi, and Hassan M. Najadat. An Automatic Text Classification System Based on Genetic Algorithm. In *Proceedings of the The 3rd Multidisciplinary International Social Networks Conference on SocialInformatics 2016, Data Science 2016*.
48. Ismail Hmeidi, Mohammed Khaleel, Hassan Najadat, "Automatic Text Classification: A Comparative Study", *Proceedings of the International Computer Sciences and Informatics Conference (ICSIC 2016)*, pp. 179-189, Amman, Jordan, 2016.
49. I Alsmadi, H Najadat, I Al-Oqily, "Evaluating the importance of the weight factors in DEA optimization", *International Journal of Data Science* 1 (2) 2015, 172-188.

50. Amer Al-Badarneh, Ali Alrazqi, Hassan Najadat, " Performance Impact of Texture Features on MRI Image Classification", Istanbul, The International Conference on Engineering & MIS (ICEMIS2015), Turkey, 24-26 September, 2015
51. H Najadat, A Rawashdeh, "Concept Extraction from Arabic Text Based On Semantic Analysis", The International Technology Management Conference (ITMC2015), May, 26-28, 2015 Antalya, Turkey.
52. Hassan Najadat, Yasser M. Jaffal, Basel A. Mahafzah, Safwan S. Al-Omar, "A New Fine-Grained Multithreaded Game Engine Approach", International Journal of Modelling and Simulation, 2014.
53. Hassan M. Najadat, Mohammed Al-Maolegi, Bassam Arkok, "An Improved Apriori Algorithm for Association Rules", International Research Journal of Computer Science and Application Vol. 1, No.1, June 2013, PP: 01 –08.
54. Khaled Khateb, Hassan Najadat, et al, "Stock Price Prediction using k-Nearest Neighbors (kNN) Algorithm", International Journal of Business, Humanities and Technology, Vol 3, No 3(2013). Pages 32-44.
55. Hassan Najadat, Izzat Alsmadi, and Yazan Shboul, "Predicting Software Projects Cost Estimation Based on Mining Historical Data", ISRN Software Engineering, Volume 2012.
56. Izzat Alsmadi and Hassan Najadat, "Evaluating the Change of Software Fault Behavior with Dataset Attributes Based on Categorical Correlation", Advances in Engineering Software, Volume 42, Issue 8 (2011), Pages 535-546.
57. Hassan Najadat and Izzat Alsmadi, "Enhance Rule Based Detection for Software Fault Prone Modules", International Journal of Software Engineering and Its Applications IJSEIA, Volume 5, No. 3 (2011).
58. Hassan Najadat, Shatnawi Amani, Obiedat Ghadeer, "A New Perfect Hashing and Pruning Algorithm for Mining Association Rule", Communications of the IBIMA Journal, Volume 2011 (2011).
59. Hassan Najadat, Rasha Obeidat, Ismail Hmeidi, "Clustering Generalized Instances Set Approaches for Text Classification", Journal of Information & Knowledge Management (JIKM), Vol. 10, No. 1 (2011), Pages 91-107.
60. Ismail I. Hmeidi, Riyad F. Al-Shalabi, Ahmad T. Al-Taani, Hassan Najadat and Shaker A. Al-Hazaimh, "A Novel Approach to the Extraction of Roots from Arabic Words Using Bigrams" Journal of the American Society for Information Science and Technology, Volume 61, Issue 3(2010), Pages 583 – 591.
61. Hassan Najadat and Ismail Hmeidi, "Web Spam Detection Using Machine Learning in Specific Domain Features", Journal of Information Assurance and Security, Vol. 3, No. 3 (2008), Pages 220-229.
62. Hassan Najadat, "A New Approach for Recoverable Timestamp Ordering Schedule", Special Journal Issue of World Academy of Science, Engineering and Technology Journal, Volume 13, No. 26 (2006), Pages 131-135.
63. Imad Rahal, Hassan Najadat, and William Perrizo, "Efficiency Considerations for Vertical kNN Text Categorization", Journal of Information & Knowledge Management (JIKM), Vol. 5, No. 3 (2006), Pages 211-222.
64. A. Al-Badarneh, H. Najadat, A. M. Alraziqi, "A Classifier to Detect Tumor Disease in MRI Brain Images", *ASONAM*, 2012, 2012 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, 2012 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining 2012, pp. 784-787, doi:10.1109/ASONAM.2012.142
65. Hassan Najadat, Yasser Jaffal, Omar Darwish, Niveen Yasser, "A Classifier to Detect Abnormality in CT Brain Images, The 2011 IAENG International Conference on Data Mining and Applications, Pages 374- 377, Hong Kong, March 16-18th 2011.
66. Hassan Najadat, Izzat Alsmadi, "DEA based decision support system for public hospitals in Jordan", 16th IBIMA Conference on Innovation and Knowledge Management Kuala Lumpur, Malaysia 29-30 June 2011

67. Hassan Najadat, Izzat Alsmadi, "An Interactive DEA Based Management System for Hospitals", The 2011 IAENG International Conference on Industrial Engineering, Pages 1157-1161, 2011, Hong Kong, March 16-18th 2011.
68. Hassan Najadat, Izzat Alsmadi and Isra' Abu-jazouh, "Using Data Envelopment Analysis to Evaluate Productivity of Public Hospitals In Jordan", 8th International Conference on Data Envelopment Analysis Performance Management and Measurement, AUB, Beirut, Lebanon, June 10-12th 2010.
69. Qusai Abuein, Hassan Najadat, Wedian Sana, Deya Alzoubi, "A New Efficient KEA Based Approach for E-mail Spam Detection", The International Arab Conference on Information Technology, University of Science and Technology, Yemen, December 15-17th 2009.
70. Hassan Najadat, Qusai Abuein, Mohammed Abu-Rahmeh, "A New Approach for Solving Constraint Satisfaction Problems: Coloring Problem Using Non-Adjacent Lists", Proceedings of International Conference of Software Engineering & Computer Systems 2009 (ICSECS '09)., Pahang, Malaysia, October 19-21st 2009
71. Hassan Najadat, Mohammed Aref Diab, Izzat Alsmadi, "A General-Domain Application for implementing the Case-Based Reasoning", Proceedings of International Conference of Software Engineering & Computer Systems 2009 (ICSECS '09), Pahang, Malaysia, October 19-21st 2009.
72. Hassan Najadat and Mohammad Kharabsheh, "User Constraints in discovering Association Rules Mining", Proceedings of International Arab Conference on Information Technology (ACIT'2008), University of Sfax, Tunisia, December 16-18th 2008.
73. Ismail I. Hmeidi, Hassan M. Najadat, Ahmed J. Al-Sha'or, "Application of Genetic Algorithm In Automatic Query Expansion", Proceedings of International Arab Conference on Information Technology (ACIT'2008), University of Sfax, Tunisia, December 16-18th 2008.
74. Hassan Najadat, Hadeel Ammari, and Ismail Hmeidi, "Solving the Constraint Satisfaction Problem Using Genetic Algorithms", Proceedings of The 2008 International Conference on Artificial Intelligence ICAI'08, USA, July 14-17th 2008.
75. Izzat Alsmadi and Hassan Najadat, "Using Xml Trees To Represent GUI States", Proceedings of The 2008 International Conference on Software Engineering Research and Practice (SERP 08) , USA, July 14-17th 2008.
76. Ismail Hmeidi, Musa I. Swedan, and Hassan Najadat, " Intelligent Favorite List by Using kNN and Nave Bayes Classifier", Proceedings of The 2008 International Conference on Semantic Web and Web Services (SWWS'08), USA, July 14-17th 2008.
77. Hassan Najadat, Kendall E. Nygard, and Doug Schesvold, "Clustering-Based Method for Data Envelopment Analysis", Proceedings of The 2005 International Conference on Modeling, Simulation and Visualization Methods, {MSV} pp. 255—264, Las Vegas, Nevada, USA, June 27-30, 2005.
78. Imad Rahal, Dongmei Ren, Amal Perera, Hassan Najadat, William Perrizo, Riad Rahhal, and Willy Valdivia, "Incremental Interactive Mining of Constrained Association Rules from Biological Annotation Data with Nominal Features", Proceedings of the ACM SAC, Symposium on Applied Computing (Santa Fe, New Mexico), Pages 123-127, March 13-17th, 2005.
79. "Constraint-Based Clustering Procedure for Data Envelopment Analysis. North Dakota State University (PhD. dissertation), May 13th 2005.
80. Najadat H., Ebrahim M., Alsmirat M., Shatnawi O., Al-Rashdan M.N., Al-Aiad A. (2021) Investigating the Classification of Human Recognition on Heterogeneous Devices Using Recurrent Neural Networks. In: Ahad M., Paiva S., Zafar S. (eds) Sustainable and Energy Efficient Computing Paradigms for Society. EAI/Springer Innovations in Communication and Computing. Springer, Cham. [https://doi.org/10.1007/978-3-030-51070-1\\_4](https://doi.org/10.1007/978-3-030-51070-1_4).
81. Ali Al-Raziqi, Amer Al-Badarneh, Hassen Najadat, "Classification of brain diseases using MRI texture: Decision Tree and Genetic Algorithm", Publisher: VDM Verlag
82. Hassan Najadat, "Mining Data Envelopment Analysis using Clustering Approach: for Heterogeneous Decision Making Units", 2009, Publisher: VDM Verlag.

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## **SUBMITTED PAPERS**

1. Can We Use Deep Learning to Predict Children Psychological Indicators Based on Their Colored Drawings? Submitted to BMJ Health & Care Informatics, 2024.
2. Fatty Liver Detection in CT Images using Deep Learning Submitted to Informatics in Medicine Unlocked Journal, Ahmad M. Mustafa, Hamzeh Hailat; Hassan Najadat, Mamoon Al-Omari, Sofyan Freihat, 2024

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## **FUNDED PROJECTs and PROFESSIONAL DEVELOPMENT ACTIVITIES**

1. Jordan Opportunity for Virtual Innovation Teaching and Learning (JOVITAL), Duration: 2017-2020, Amount: €999,901, Funded by: European Union (ERASMUS+)
2. Erasmus+ JOVITAL PROJECT- Jordan opportunity for virtual innovative teaching and learning - Academic Staff Training on Virtual Collaborative Learning (VCL), Princess Sumaya University for Technology (PSUT), Jordan, oct.3<sup>rd</sup> -5<sup>th</sup> Oct. 2019.
3. Erasmus+ JOVITAL PROJECT- attending Workshop at Centre for Global Learning: Education and Attainment (GLEA), Coventry University, UK, Sept. 2<sup>nd</sup> – Sept. 6- 2019.
4. Erasmus+ JOVITAL PROJECT- attending Workshop at Technische Universität Dresden, Germany. April 25-27, 2018.
5. EU TEMPUS PROJECT (ICT-LEAP) Workshop, Dortmund University of Technology, Germany. [February 12-15th 2009]
6. EU TEMPUS PROJECT (ICT-LEAP) Workshop, Umeå University, Sweden, [June 16-18th 2009]

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## **MASTER THESIS SUPERVISED**

1. Mining Association Rules Based on User Defined Constraints, [Mohammad Kharabsheh, Dept. of Computer Science, J.U.S.T, [May-2007]
2. Automatic Concept Extraction from Arabic Text, [Ahmad Yousef Rawashdeh, Dept. of Computer Science, J.U.S.T, [December- 2008]
3. Text Classification improvement by combining Multilevel Clustering into kNN, [Rasha Obeidat, Dept. of Computer Science, J.U.S.T, [January-2009].
4. A Rule-Based Computerization of Advanced Tajweed Rules, [Huda Alazzah, CS – JUST].
5. Design and Implementation of a Dynamic Multithreaded Game Engine for Multicore Processors, [Yasser Mousa Jaffal, Dept. of Computer Science, J.U.S.T, [December -2010]
6. Software Prototyping from UML Diagrams Using Language-Independent User Interfaces, [Amani Moh'd Shatnawi, Advisor Dr. Raed Shatnawi, Co. advisor Dr. Hassan Najadat, [June-2010]
7. Applying Data Mining for Software Cost Estimation Using a Classification Model, [Yazen Shboul, Dept. of Computer Science, J.U.S.T, 2011]
8. Building an Optimized MRI Brain Images Classifier Based on Hybrid Intelligent Techniques, [Ali Alrazgi, Advisor Dr. Amer Bdarnah, Co advisor Dr. Hassan Najadat Dept. of Computer Science, J.U.S.T, 2012]
9. Automatic key Phrase Extraction from Arabic Language Text [Missa Bany Essa, Advisor Dr. Ismail Hmeidi, Co. advisor Dr. Hassan Najadat, July 2012].
10. An Arabic Text Classification System Based on Genetic Algorithm [Mohammed I. Khaleel Advisor Dr. Ismail Hmeidi, Co. advisor Dr. Hassan Najadat]
11. Accreditation System for Educational Programs [Huda Hani Qawasmi, Advisor Dr. Hassan, Co advisor Amer, 2016].
12. Detecting Arabic Spam Reviews in Social Networks based on Classification Algorithms [Islam Advisor Dr. Hassan, 2015]
13. Clustering analysis for evaluating efficiency of higher educational institutions [Bushra Alza'arer, Advisor Dr. Hassan, 2016].
14. Classification Approaches for Jordanian Universities with Data Envelopment Analysis [Yasmen Omari, Advisor Dr. Hassan 2017].
15. An Automated Approach for Optimizing the Service Broker Routing Policy based on Bat Algorithm [Huda Daradkeh, Co- Advisor Dr. Hassan 2017].

16. A constraint association rule mining for automated detection of cardiovascular diseases [Hadeel Arayedah, Advisor Dr. Hassan 2017].
17. A Hybrid Approach of Data Envelopment Analysis and Ensemble Methods for Performance Evaluation of Industrial and Services firms in Jordan, [Ibraheem Mansi, Advisor Dr. Hassan 2017].
18. Classification of Application Reviews into Software Engineering's Maintenance Tasks Using Data Mining Techniques, [Asem Alhawari, Advisor Dr. Hassan, 2018].
19. A Hybrid Model of Machine Learning (ML) and Data Envelopment Analysis (DEA) for E-government Websites Efficiency Evaluation, [Sawsan Aloaidbat, Advisor Dr. Hassan 2019].
20. Developing a Breast Cancer Dictionary Using Natural Language Processing (NLP), [Wessam Dolat, Advisor Dr. Hassan, 2019].
21. A new approach for the detection of eosinophils in the gastrointestinal tract and the diagnosis of eosinophilic colitis, Wala Eiadat, Co- Advisor Dr. Hassan, 2020].
22. Detection of Hateful Social Media Content for Arabic Language based on Deep Learning [Roqya Advisor Dr. Hassan, Co Advisor: Mustafa ]

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## TEACHING

I have taught many courses at various universities, including Jordan University of Science and Technology (JUST), New York Institute of Technology Amman Campus (NYiT), Taif University (TU) in Saudi Arabia, and Princess Sumaya University for Technology (PSUT) in Jordan.

### Undergraduate Level Courses

DS101 Data Science Essentials  
 CIS328/CIS228/CIS221 "Fundamentals of Database Systems", JUST  
 CS 362 Artificial Intelligence, JUST  
 CIS 429/321 Data Mining, JUST  
 CIS 493 Special Topics , JUST  
 CIS 390 Field Training, JUST  
 CIS 491/492 Graduation Project I, II, JUST  
 CS116 Selected Programming Languages, JUST  
 CS115 C++ Programming Language, JUST  
 CSCI260 Data Structure, NYiT  
 CSCI 300 Database Systems, NYiT  
 CSCI180 Computer Programming II, NYiT  
 502312 Software Engineering, TU  
 502211 System Analysis & Design, TU  
 502422 Information Management System, TU  
 502425 Decision Support Systems, TU  
 501124 Computer Programming 2, TU  
 502241 Fundamentals of Databases, TU  
 Data Engineering, PSUT  
 Intro to Computer Science, PSUT

### Graduate Level Courses

CIS701 Data Science Essentials  
 CIS722 Data Analytics  
 CS728 Advanced Database Systems, JUST  
 CS762 Advanced Artificial Intelligence, JUST  
 CS729 Advanced Methods in Data Mining, JUST  
 CIS722 Data Analytics, JUST  
 CSCI760 Database Systems, NYiT  
 CSCI731 Compiler Theory, NYiT  
 MIST720 Database Management Systems, NYiT  
 CSCI606 Distributed Systems, NYiT  
 Research Methodology Seminar, PSUT

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