Academic Resume

Fawaz Alsolami

Associate Professor, Computer Science Department

Dr. Fawaz is an associate professor of computer science. He published many articles in high impact factor and he is a co-author of a highly cited article of the year of academic field of Computer Science based on highly cited threshold for the field and publication year. His research interests include artificial intelligence, machine learning and data mining, and combinatorial optimization. He has more than 10 funded projects.

Contact Information.

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Highest Degree.

2016, , Artificial Intelligence, King Abdullah University of Science and Technology, Saudi Arabia.

Academic and Professional Experiences.

1. **2021 - Present**
   Associate Professor, Computer Science Department, Faculty of Computing and Information Technology, KING ABDULAZIZ UNIVERSITY..
2. **2018 - 2022**
   Chairman, Computer Science Department, Faculty of Computing and Information Technology, KING ABDULAZIZ UNIVERSITY.
3. **2016 - 2021**
   Assistant Professor, Computer Science Department, Faculty of Computing and Information Technology, KING ABDULAZIZ UNIVERSITY.
4. **2009 - 2016**
   Lecturer, Computer Science, Faculty of Computing and Information Technology, KING ABDULAZIZ UNIVERSITY.

Research Interests.

Artificial Intelligence, Deep learning, Combinatorial optimization.

Teaching Interests.

Artificial Intelligence, Algorithms and Data Structures, Machine Learning.

Certifications and Trainings.

Social, Scientific and Professional Affiliation.

1. -, Member, SIAM.
2. -, Member, ACM.

Funded Projects.

1. 2020, Efficient and Privacy-Preserving Infection Control System for Covid-19-Like Pandemics using Blockchain, The Deanship of Scientific Research DSR at King Abdulaziz University, DF-744-611-1441, completed.
2. 2020, Efficient Privacy-Preserving Electricity Theft Detection With Dynamic Billing and Load Monitoring for AMI Networks, Deanship of Scientific Research at King Abdulaziz University, Jeddah, DF-311-611-1441,completed.
3. 2020, Development of Self-Synchronized Drones&#039;&#039; Network Using Cluster-Based Swarm Intelligence Approach, Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, DF-322-611-1441, completed.
4. 2020, Impact Assessment of COVID-19 Pandemic Through Machine Learning Models, Ministry of Education and Deanship of Scientific Research at King Abdulaziz University, Kingdom of Saudi Arabia, IFPHI2676112020, completed.
5. 2020, A Pseudo Feedback-Based Annotated TF-IDF Technique for Dynamic Crypto-Ransomware Pre-Encryption Boundary Delineation and Features Extraction, Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, DF-742-611-1441.
6. 2020, Privacy-Preserving and Efficient Data Collection Scheme for AMI Networks Using Deep Learning, Deanship of Scientific Research (DSR) at King Abdulaziz University, DF-745-611-1441, completed.
7. 2020, Privacy-Preserving and Efficient Data Collection Scheme for AMI Networks Using Deep Learning, Deanship of Scientific Research (DSR) at King Abdulaziz University, DF-743-611-1441, completed.
8. 2021, Efficient Search over Encrypted Medical Data with Known-Plaintext/Background Models and Unlinkability, Deanship of Scientific Research (DSR) at King Abdulaziz University, KEP-16-611-42, completed.
9. 2021, A Mobility-aware Human-centric Cyber-physical System for Efficient and Secure Smart Healthcare, Ministry of Education and Deanship of Scientific Research at King Abdulaziz University, Kingdom of Saudi Arabia,, IFPIP-855-611-1442, completed.
10. 2020, Connected Objects Geo-Localization Based on SS-RSRP of 5G Networks, Deanship of Scientific Research (DSR) at King Abdulaziz University, G-840-611-1441,completed.
11. 2021, Electricity Theft Detection for Change-and-Transmit Advanced Metering Infrastructure, Deanship of Scientific Research (DSR) at King Abdulaziz University, KEP-18-611-42, completed.
12. 2021, Blockchain and PUF-based Lightweight Authentication Protocol for Wireless Medical Sensor Networks, Deanship of Scientific Research (DSR) at King Abdulaziz University, KEP-16-611-42, completed.
13. 2021, Enhancing the Performance of Lightweight Configurable PUF for Robust IoT Hardware-Assisted Security, Deanship of Scientific Research (DSR) at King Abdulaziz University, KEP-18-611-42, completed.

Publications.

1. Muhammad Sher Ramzan, Anees Asghar, Ata Ullah, Fawaz Alsolami, Iftikhar Ahmad, "A Bee Colony-Based Optimized Searching Mechanism In The Internet Of Things", Future Internet, vol: 16, pp. 35, 2024.
   DOI: 10.3390/fi16010035

2. Junaid M. Qurashi, Kamal Jambi, Fawaz Alsolami, Fathy E. Eassa, Maher Khemakhem, Abdullah Basuhail, "Resilient Countermeasures Against Cyber-Attacks On Self-Driving Car Architecture", Ieee Transactions On Intelligent Transportation Systems, pp. 1-30, 2023.
   DOI: 10.1109/TITS.2023.3288192

3. Abdulmohsen Almalawi, Asif Irshad Khan ,Fawaz Alsolami, Yoosef B. Abushark, Ahmed S. Alfakeeh, "Managing Security Of Healthcare Data For A Modern Healthcare System", Sensor, 2023.

4. Abdullah Marish Ali, Fuad A. Ghaleb, Mohammed Sultan Mohammed, Fawaz Jaber Alsolami, Asif Irshad Khan, "Web-Informed-Augmented Fake News Detection Model Using Stacked Layers Of Convolutional Neural Network And Deep Autoencoder", Mathematics, vol: 11, pp. 1992, 2023.
   DOI: 10.3390/math11091992

5. Faitouri A. Aboaoja, Anazida Zainal, Abdullah Marish Ali, Fuad A. Ghaleb, Fawaz Jaber Alsolami, Murad A. Rassam, "Dynamic Extraction Of Initial Behavior For Evasive Malware Detection", Mathematics, vol: 11, pp. 416, 2023.
   DOI: 10.3390/math11020416

6. Mahmoud M. Badr, Mohamed Mahmoud, Mohammed Abdulaal, Abdulah J. Aljohani, Fawaz Alsolami, Abdullah Balamsh, "A Novel Evasion Attack Against Global Electricity Theft Detectors And A Countermeasure", Ieee Internet Of Things Journal, pp. 1-1, 2023.
   DOI: 10.1109/JIOT.2023.3243086

7. Zaakki Ahamed, Maher Khemakhem, Fathy Eassa, Fawaz Alsolami, Abdullah S. Al-Malaise Al-Ghamdi, "Technical Study Of Deep Learning In Cloud Computing For Accurate Workload Prediction", Electronics, vol: 12, pp. 650, 2023.
   DOI: 10.3390/electronics12030650

8. Muhammad Farooq-i-Azam, Qiang Ni, Mianxiong Dong, Haris Pervaiz, Charilaos Zarakovitis, Fawaz Alsolami, "Interference Avoidance In Cognitive Radio Networks Using Cooperative Localization", Ieee Systems Journal, vol: 16, pp. 5120-5130, 2022.
   DOI: 10.1109/JSYST.2022.3204308

9. Mohamed I. Ibrahem, Mohamed M. E. A. Mahmoud, Fawaz Alsolami, Waleed Alasmary, Abdullah Saad AL-Malaise AL-Ghamdi, Xuemin Shen, "Electricity-Theft Detection For Change-And-Transmit Advanced Metering Infrastructure", Ieee Internet Of Things Journal, vol: 9, pp. 25565-25580, 2022.
   DOI: 10.1109/JIOT.2022.3197805

10. Junaid M. Qurashi, Kamal Jambi, Fathy Eassa, Maher Khemakhem, Fawaz Alsolami, Abdullah Basuhail, "Towards Attack Modeling Technique Addressing Resilience In Self-Driving Car", Ieee Access, pp. 1-1, 2022.
    DOI: 10.1109/ACCESS.2022.3233424

11. Abdullah Marish Ali, Fuad A. Ghaleb, Bander Ali Saleh Al-Rimy, Fawaz Jaber Alsolami, Asif Irshad Khan, "Deep Ensemble Fake News Detection Model Using Sequential Deep Learning Technique", Sensors, vol: 22, pp. 6970, 2022.
    DOI: 10.3390/s22186970

12. Asif Irshad Khan, Fawaz Alsolami, Fahad Alqurashi, Yoosef B. Abushark, Iqbal H. Sarker, "Novel Energy Management Scheme In Iot Enabled Smart Irrigation System Using Optimized Intelligence Methods", Engineering Applications Of Artificial Intelligence, vol: 114, pp. 104996, 2022.
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Publications.

13. Abdul Razaque, Fathi Amsaad, Musbah Abdulgader, Bandar Alotaibi, Fawaz Alsolami, Duisen Gulsezimhas, Saraju Mohanty, Salim Hariri, "A Mobility-Aware Human-Centric Cyber-Physical System For Efficient And Secure Smart Healthcare", Ieee Internet Of Things Journal, pp. 1-1, 2022.
    DOI: 10.1109/JIOT.2021.3140090

14. Abdullah S. AL-Malaise AL-Ghamdi, Mahmoud Ragab, F. J. Alsolami, Hani Choudhry, Ibrahim Rizqallah Alzahrani, "Intelligent Forensic Investigation Using Optimal Stacked Autoencoder For Critical Industrial Infrastructures", Computers, Materials & Continua, vol: 72, pp. 2275-2289, 2022.
    DOI: 10.32604/cmc.2022.026226

15. Yoosef B. Abushark, Asif Irshad Khan, Fawaz Alsolami, Abdulmohsen Almalawi, Md Mottahir Alam, Alka Agrawal, Rajeev Kumar, Raees Ahmad Khan, "Cyber Security Analysis And Evaluation For Intrusion Detection Systems", Computers, Materials & Continua, vol: 72, pp. 1765-1783, 2022.
    DOI: 10.32604/cmc.2022.025604

16. Iqbal H. Sarker, Asif Irshad Khan, Yoosef B. Abushark, Fawaz Alsolami, "Internet Of Things (Iot) Security Intelligence: A Comprehensive Overview, Machine Learning Solutions And Research Directions", Mobile Networks And Applications, 2022.
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17. Asif Irshad Khan, Abdullah Saad Al-Malaise ALGhamdi, Fawaz Jaber Alsolami, Yoosef B. Abushark, Abdulmohsen Almalawi, Abdullah Marish Ali, Alka Agrawal, Rajeev Kumar, Raees Ahmad Khan, "Integrating Blockchain Technology Into Healthcare Through An Intelligent Computing Technique", Computers, Materials &Amp; Continua, vol: 70, pp. 2835-2860, 2022.
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18. Ahmed S. Alfakeeh, Abdulmohsen Almalawi, Fawaz Jaber Alsolami, Yoosef B. Abushark, Asif Irshad Khan, Adel Aboud S. Bahaddad, Alka Agrawal, Rajeev Kumar, Raees Ahmad Khan, "Hesitant Fuzzy-Sets Based Decision-Making Model For Security Risk Assessment", Computers, Materials &Amp; Continua, vol: 70, pp. 2297-2317, 2022.
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19. Ahmed Bannour, Ahmed Harbaoui, Fawaz Alsolami, "Connected Objects Geo-Localization Based On Ss-Rsrp Of 5g Networks", Electronics, vol: 10, pp. 2750, 2021.
    DOI: 10.3390/electronics10222750

20. Iqbal H. Sarker , Asif Irshad Khan , Yoosef B. Abushark , Fawaz Alsolami , "Mobile Expert System: Exploring Context-Aware Machine Learning Rules For Personalized Decision-Making In Mobile Applications", Symmetry, vol: 13, pp. 1975, 2021.
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21. Fathi Amsaad, Ahmed Oun, Mohammed Y. Niamat, Abdul Razaque, Seluck Kose, Mohamed Mahmoud, Waleed Alasmary, Fawaz Alsolami, "Enhancing The Performance Of Lightweight Configurable Puf For Robust Iot Hardware-Assisted Security", Ieee Access, vol: 9, pp. 136792-136810, 2021.
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22. Weizheng Wang, Chen Qiu, Zhimeng Yin, Gautam Srivastava, Thippa Reddy Gadekallu, Fawaz Alsolami, Chunhua Su, "Blockchain And Puf-Based Lightweight Authentication Protocol For Wireless Medical Sensor Networks", Ieee Internet Of Things Journal, pp. 1-1, 2021.
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23. Mohamed I. Ibrahem, Mohamed Mahmoud, Mostafa M. Fouda, Fawaz Alsolami, Waleed Alasmary, Xuemin Shen, "Privacy-Preserving And Efficient Data Collection Scheme For Ami Networks Using Deep Learning", Ieee Internet Of Things Journal, pp. 1-1, 2021.
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24. Mahmoud M. Badr, Mohamed I. Ibrahem, Mohamed Mahmoud, Mostafa M. Fouda, Fawaz Alsolami, Waleed Alasmary, "Detection Of False-Reading Attacks In Smart Grid Net-Metering System", Ieee Internet Of Things Journal, pp. 1-1, 2021.

    DOI: 10.1109/JIOT.2021.3087580

25. Seham A. Alansari, Mahmoud M. Badr, Mohamed Mahmoud, Waleed Alasmary, Fawaz Alsolami, Abdullah Marish Ali, "Efficient And Privacy-Preserving Infection Control System For Covid-19-Like Pandemics Using Blockchain", Ieee Internet Of Things Journal, pp. 1-1, 2021.

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26. Fawaz Alsolami, Fahad A. Alqurashi, Mohammad Kamrul Hasan, Rashid A. Saeed, S. Abdel-Khalek, Anis Ben Ishak, "Development Of Self-Synchronized Drones&Amp;Rsquo; Network Using Cluster-Based Swarm Intelligence Approach", Ieee Access, vol: 9, pp. 48010-48022, 2021.

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27. Fawaz Jaber Alsolami, Abdullah Saad Al-Malaise ALGhamdi, Asif Irshad Khan, Yoosef B. Abushark, Abdulmohsen Almalawi, Farrukh Saleem, Alka Agrawal, Rajeev Kumar, Raees Ahmad Khan, "Impact Assessment Of Covid-19 Pandemic Through Machine Learning Models", Computers, Materials &Amp;Amp; Continua, vol: 68, pp. 2895-2912, 2021.

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28. Yoosef B. Abushark, Asif Irshad Khan, Fawaz Jaber Alsolami, Abdulmohsen Almalawi, Md Mottahir Alam, Alka Agrawal, Rajeev Kumar, Raees Ahmad Khan, "Usability Evaluation Through Fuzzy Ahp-Topsis Approach: Security Requirement Perspective", Computers, Materials &Amp;Amp; Continua, vol: 680, pp. 1203-1218, 2021.

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29. Mohamed I. Ibrahem, Mahmoud Nabil, Mostafa M. Fouda, Mohamed Mahmoud, Waleed Alasmary, Fawaz Alsolami, "Efficient Privacy-Preserving Electricity Theft Detection With Dynamic Billing And Load Monitoring For Ami Networks", Ieee Internet Of Things Journal, pp. 1-1, 2020.

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30. Fawaz J. Alsolami, "Measuring The Performance Of Inventory Management System Using Arena Simulator", International Journal Of Advanced Computer Science And Applications, vol: 11, 2020.

    DOI: 10.14569/IJACSA.2020.0110624

31. Bander Ali Saleh Al-rimy, Mohd Aiziani Maarof, Mamoun Alazab, Fawaz Alsolami, Syed Zainudeen Mohd Shaid, Fuad A. Ghaleb, Tawfik Al-Hadhrami, Abdullah Marish Ali, "A Pseudo Feedback-Based Annotated Tf-Idf Technique For Dynamic Crypto-Ransomware Pre-Encryption Boundary Delineation And Features Extraction", Ieee Access, pp. 1-1, 2020.

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32. Abhishek Kumar Pandey, Fawaz Alsolami, "Malware Analysis In Web Application Security: An Investigation And Suggestion", International Journal Of Advanced Computer Science And Applications, vol: 11, 2020.

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33. Abdur Rahman, M. Shamim Hossain, Nabil A. Alrajeh, Fawaz Alsolami, "Adversarial Examples ??? Security Threats To Covid-19 Deep Learning Systems In Medical Iot Devices", Ieee Internet Of Things Journal, pp. 1-1, 2020.

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34. Iqbal H. Sarker, Yoosef B. Abushark, Fawaz Alsolami, Asif Irshad Khan, "Intrudtree: A Machine Learning Based Cyber Security Intrusion Detection Model", Symmetry, vol: 12, pp. 754, 2020.

    DOI: 10.3390/sym12050754

Publications.

35. Fawaz Alsolami, Talha Amin, Mikhail Moshkov, Beata Zielosko, Krzysztof ??abi??ski, "Comparison Of Heuristics For Optimization Of Association Rules", Fundamenta Informaticae, vol: 166, pp. 1-14, 2019.
   DOI: 10.3233/FI-2019-1791

36. Fawaz Alsolami, Talha Amin, Igor Chikalov, Mikhail Moshkov, "Bi-Criteria Optimization Problems For Decision Rules", Annals Of Operations Research, 2018.
   DOI: 10.1007/s10479-018-2905-0

37. Abdullah Algarni, Fawaz Alsolami, Fathy Eassa, Khalid Alsubhi, Kamal Jambi, Maher Khemakhem, "An Open Tool Architecture For Security Testing Of Nosql-Based Applications", 2017 Ieee/Acs 14th International Conference On Computer Systems And Applications (Aiccsa), pp. 220-225, 2017.
   DOI: 10.1109/AICCSA.2017.44

38. Fawaz Alsolami, Talha Amin, Igor Chikalov, Mikhail Moshkov, Beata Zielosko, Ludwik Czaja, Wojciech Penczek, Krzysztof Stencel, "Dynamic Programming Approach For Construction Of Association Rule Systems", Fundamenta Informaticae, vol: 147, pp. 159-171, 2016.
   DOI: 10.3233/FI-2016-1402

39. Fawaz Alsolami, Igor Chikalov, Mikhail Moshkov, "Comparison Of Heuristics For Inhibitory Rule Optimization", Procedia Computer Science, vol: 35, pp. 378-387, 2014.
   DOI: 10.1016/j.procs.2014.08.118