

Academic Resume



Iyad Katib

Professor, Computer Science Department

Iyad Katib is a Professor with the Computer Science Department and the current Dean of the Faculty of Computing and Information Technology (FCIT) in King Abdulaziz University (KAU).

Iyad received his Ph.D. and MS degrees in Computer Science from University of Missouri-Kansas City in 2011 and 2004, respectively. He received his BS degree in Statistics/Computer Science from King Abdul Aziz University in 1999.

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Highest Degree.

2011, Ph.D. in Computer Science, Telecommunications and Computer Networking, University of Missouri-Kansas City, USA.

Academic and Professional Experiences.

1. **2021 - Present**
Professor, Computer Science Department, King Abdulaziz University.
2. **2020 - Present**
Dean, Faculty of Computing and Information Technology, King Abdulaziz University.
3. **2017 - 2020**
Associate Professor, Computer Science Department, King Abdulaziz University.
4. **2015 - 2020**
Vice Dean, Faculty of Computing and Information Technology, King Abdulaziz University.
5. **2012 - 2017**
Assistant Professor, Computer Science Department, King Abdulaziz University.
6. **2010 - 2011**
Instructor, Department of Computer Science and Electrical Engineering, University of Missouri-Kansas City, USA.

Research Interests.

Computer Networking, High Performance Computing, Big Data, Optical Networking.

Teaching Interests.

Network Computing, Discrete Structures, Telecommunications, Computer Programming.

Certifications and Trainings.

1. Awarded a scholarship from the Ministry of Higher Education in Saudi Arabia from 2002 to 2011.
2. Completed a Responsible Conduct of Research (RCR) course for engineers, a requirement imposed by the 2007 America COMPETES Act for all National Science Foundation (NSF) funded research and projects..

Social, Scientific and Professional Affiliation.

1. 2010-Present, Member, ITC.
2. 2009-Present, Member, IEEE.

Publications.

1. Junhui Wu, Gang Qin, Jun Cheng, Jinde Cao, Huaicheng Yan, Iyad Katib, "Adaptive Neural Network Control For Markov Jumping Systems Against Deception Attacks", Neural Networks, vol: 168, pp. 206-213, 2023.
DOI: [10.1016/j.neunet.2023.09.027](https://doi.org/10.1016/j.neunet.2023.09.027)
2. Gang Qin, An Lin, Jun Cheng, Mengjie Hu, Iyad Katib, "Protocol-Based Fault Detection Filtering For Memristive Neural Networks With Dynamic Quantization", Journal Of The Franklin Institute, vol: 360, pp. 13395-13413, 2023.
DOI: [10.1016/j.jfranklin.2023.10.019](https://doi.org/10.1016/j.jfranklin.2023.10.019)
3. Wei Kang, Gang Qin, Jun Cheng, Huaicheng Yan, Iyad Katib, Jinde Cao, "Probabilistic Event-Triggered Protocol For Switched Power Systems Under Multi-Strategy Deception Attack", Journal Of The Franklin Institute, 2023.
DOI: [10.1016/j.jfranklin.2023.09.018](https://doi.org/10.1016/j.jfranklin.2023.09.018)
4. Fang Guo, Mengzhuo Luo, Jun Cheng, Iyad Katib, Kaibo Shi, "Nonfragile Observer-Based Event-Triggered Fuzzy Tracking Control For Fast-Sampling Singularly Perturbed Systems With Dual-Layer Switching Mechanism And Cyber-Attacks", Chaos, Solitons & Fractals, vol: 175, pp. 114029, 2023.
DOI: [10.1016/j.chaos.2023.114029](https://doi.org/10.1016/j.chaos.2023.114029)
5. Mahmoud Ragab, Iyad Katib, Sanaa A. Sharaf, Fatmah Y. Assiri, Diaa Hamed, Abdullah AL-Malaise AL-Ghamdi, "Self-Upgraded Cat Mouse Optimizer With Machine Learning Driven Lung Cancer Classification On Computed Tomography Imaging", Ieee Access, pp. 1-1, 2023.
DOI: [10.1109/ACCESS.2023.3313508](https://doi.org/10.1109/ACCESS.2023.3313508)
6. Abrar Alkhamisi, Iyad Katib, Seyed M Buhari, "Blockchain -Assisted Hybrid Deep Learning-Based Secure Mechanism For Software Defined Networks", 2023 Ieee International Conference On Consumer Electronics (Icce), pp. 1-8, 2023.
DOI: [10.1109/ICCE56470.2023.10043401](https://doi.org/10.1109/ICCE56470.2023.10043401)
7. Roba Alsaigh, Rashid Mehmood, Iyad Katib, "Ai Explainability And Governance In Smart Energy Systems: A Review", Frontiers In Energy Research, vol: 11, 2023.
DOI: [10.3389/fenrg.2023.1071291](https://doi.org/10.3389/fenrg.2023.1071291)
8. Sarah Alswedani, Rashid Mehmood, Iyad Katib, Saleh M. Altowaijri, "Psychological Health And Drugs: Data-Driven Discovery Of Causes, Treatments, Effects, And Abuses", Toxics, vol: 11, pp. 287, 2023.
DOI: [10.3390/toxics11030287](https://doi.org/10.3390/toxics11030287)
9. Iyad Katib, Mahmoud Ragab, "Blockchain-Assisted Hybrid Harris Hawks Optimization Based Deep Ddos Attack Detection In The Iot Environment", Mathematics, vol: 11, pp. 1887, 2023.
DOI: [10.3390/math11081887](https://doi.org/10.3390/math11081887)
10. Nourah Janbi, Iyad Katib, Rashid Mehmood, "Distributed Artificial Intelligence: Taxonomy, Review, Framework, And Reference Architecture", Intelligent Systems With Applications, vol: 18, pp. 200231, 2023.
DOI: [10.1016/j.iswa.2023.200231](https://doi.org/10.1016/j.iswa.2023.200231)
11. Iyad Katib, Fatmah Y. Assiri, Hesham A. Abdushkour, Diaa Hamed, Mahmoud Ragab, "Differentiating Chat Generative Pretrained Transformer From Humans: Detecting Chatgpt-Generated Text And Human Text Using Machine Learning", Mathematics, vol: 11, pp. 3400, 2023.
DOI: [10.3390/math11153400](https://doi.org/10.3390/math11153400)
12. Iyad Katib, Fatmah Y. Assiri, Turki Althaqafi, Zenah Mahmoud AlKubaisy, Diaa Hamed, Mahmoud Ragab, "Hybrid Hunter-Prey Optimization With Deep Learning-Based Fintech For Predicting Financial Crises In The Economy And Society", Electronics, vol: 12, pp. 3429, 2023.
DOI: [10.3390/electronics12163429](https://doi.org/10.3390/electronics12163429)

Publications.

13. Cristina Zuheros, Eugenio Mart?nez-C?mara, Enrique Herrera-Viedma, Iyad A. Katib, Francisco Herrera, "Explainable Crowd Decision Making Methodology Guided By Expert Natural Language Opinions Based On Sentiment Analysis With Attention-Based Deep Learning And Subgroup Discovery", *Information Fusion*, vol: 97, pp. 101821, 2023.
DOI: [10.1016/j.inffus.2023.101821](https://doi.org/10.1016/j.inffus.2023.101821)
14. Nisha Rawindaran, Liqaa Nawaf, Suaad Alarifi, Daniyal Alghazzawi, Fiona Carroll, Iyad Katib, Chaminda Hewage, "Enhancing Cyber Security Governance And Policy For Smes In Industry 5.0: A Comparative Study Between Saudi Arabia And The United Kingdom", *Digital*, vol: 3, pp. 200-231, 2023.
DOI: [10.3390/digital3030014](https://doi.org/10.3390/digital3030014)
15. Nadeem Malibari, Iyad Katib, Rashid Mehmood, "Smart Robotic Strategies And Advice For Stock Trading Using Deep Transformer Reinforcement Learning", *Applied Sciences*, vol: 12, pp. 12526, 2022.
DOI: [10.3390/app122412526](https://doi.org/10.3390/app122412526)
16. Sardar Usman, Rashid Mehmood, Iyad Katib, Aiiad Albeshri, "Data Locality In High Performance Computing, Big Data, And Converged Systems: An Analysis Of The Cutting Edge And A Future System Architecture", *Electronics*, vol: 12, pp. 53, 2022.
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17. Sarah Alswedani, Iyad Katib, Ehab Abozinadah, Rashid Mehmood, "Discovering Urban Governance Parameters For Online Learning In Saudi Arabia During Covid-19 Using Topic Modeling Of Twitter Data", *Frontiers In Sustainable Cities*, vol: 4, 2022.
DOI: [10.3389/frsc.2022.751681](https://doi.org/10.3389/frsc.2022.751681)
18. Nourah Janbi, Rashid Mehmood, Iyad Katib, Aiiad Albeshri, Juan M. Corchado, Tan Yigitcanlar, "Imtidad: A Reference Architecture And A Case Study On Developing Distributed Ai Services For Skin Disease Diagnosis Over Cloud, Fog And Edge", *Sensors*, vol: 22, pp. 1854, 2022.
DOI: [10.3390/s22051854](https://doi.org/10.3390/s22051854)
19. Sahar Busaeed, Rashid Mehmood, Iyad Katib, Juan M. Corchado, "Lidsonic For Visually Impaired: Green Machine Learning-Based Assistive Smart Glasses With Smart App And Arduino", *Electronics*, vol: 11, pp. 1076, 2022.
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20. Sarah Alswedani, Rashid Mehmood, Iyad Katib, "Sustainable Participatory Governance: Data-Driven Discovery Of Parameters For Planning Online And In-Class Education In Saudi Arabia During Covid-19", *Frontiers In Sustainable Cities*, vol: 4, 2022.
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21. Nala Alahmari, Sarah Alswedani, Ahmed Alzahrani, Iyad Katib, Aiiad Albeshri, Rashid Mehmood, "Musawah: A Data-Driven Ai Approach And Tool To Co-Create Healthcare Services With A Case Study On Cancer Disease In Saudi Arabia", *Sustainability*, vol: 14, pp. 3313, 2022.
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22. Nadeem Malibari, Iyad Katib, Rashid Mehmood, "Predicting Stock Closing Prices In Emerging Markets With Transformer Neural Networks: The Saudi Stock Exchange Case", *International Journal Of Advanced Computer Science And Applications*, vol: 12, 2021.
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23. Furqan Alam, Ahmed Almaghthawi, Iyad Katib, Aiiad Albeshri, Rashid Mehmood, "Iresponse: An Ai And Iot-Enabled Framework For Autonomous Covid-19 Pandemic Management", *Sustainability*, vol: 13, pp. 3797, 2021.
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24. Ebtesam Alomari, Iyad Katib, Aiiad Albeshri, Tan Yigitcanlar, Rashid Mehmood, "Iktishaf+: A Big Data Tool With Automatic Labeling For Road Traffic Social Sensing And Event Detection Using Distributed Machine Learning", *Sensors*, vol: 21, pp. 2993, 2021.
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25. Shumayla Yaqoob, Ata Ullah, Muhammad Awais, Iyad Katib, Aiiad Albeshri, Rashid Mehmood, Mohsin Raza, Saif ul Islam, Joel J.P.C. Rodrigues, "Novel Congestion Avoidance Scheme For Internet Of Drones", *Computer Communications*, vol: 169, pp. 202-210, 2021.
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26. Ebtesam Alomari, Iyad Katib, Aiiad Albeshri, Rashid Mehmood, "Covid-19: Detecting Government Pandemic Measures And Public Concerns From Twitter Arabic Data Using Distributed Machine Learning", *International Journal Of Environmental Research And Public Health*, vol: 18, pp. 282, 2021.
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27. Aakash Ahmad, Mahdi Fahmideh, Ahmed B. Altamimi, Iyad Katib, Aiiad Albeshri, Abdulrahman Alreshidi, Adwan Alownie Alanazi, Rashid Mehmood, "Software Engineering For Iot-Driven Data Analytics Applications", *Ieee Access*, vol: 9, pp. 48197-48217, 2021.
DOI: [10.1109/ACCESS.2021.3065528](https://doi.org/10.1109/ACCESS.2021.3065528)
28. Nourah Janbi, Iyad Katib, Aiiad Albeshri, Rashid Mehmood, "Distributed Artificial Intelligence-As-A-Service (Daiaas) For Smarter Ioe And 6g Environments", *Sensors*, vol: 20, pp. 5796, 2020.
DOI: [10.3390/s20205796](https://doi.org/10.3390/s20205796)
29. Thaha Mohammed, Aiiad Albeshri, Iyad Katib, Rashid Mehmood, "Ubipriseq Deep Reinforcement Learning To Manage Privacy, Security, Energy, And Qos In 5g Iot Hetnets", *Applied Sciences*, vol: 10, pp. 7120, 2020.
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30. Thaha Mohammed, Aiiad Albeshri, Iyad Katib, Rashid Mehmood, "Diesel: A Novel Deep Learning-Based Tool For Spmv Computations And Solving Sparse Linear Equation Systems", *The Journal Of Supercomputing*, 2020.
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31. Sahar Bosaeed, Iyad Katib, Rashid Mehmood, "A Fog-Augmented Machine Learning Based Sms Spam Detection And Classification System", *2020 Fifth International Conference On Fog And Mobile Edge Computing (Fmec)*, pp. 325-330, 2020.
DOI: [10.1109/FMEC49853.2020.9144833](https://doi.org/10.1109/FMEC49853.2020.9144833)
32. Sarah AlAhmadi, Thaha Mohammed, Aiiad Albeshri, Iyad Katib, Rashid Mehmood, "Performance Analysis Of Sparse Matrix-Vector Multiplication (Spmv) On Graphics Processing Units (Gpus)", *Electronics*, vol: 9, pp. 1675, 2020.
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33. Iyad Katib, "Investigating The Median Filter Operation On Cpu And Gpu", *Journal Of Mechanics Of Continua And Mathematical Sciences*, vol: 15, 2020.
DOI: [10.26782/jmcms.2020.08.00052](https://doi.org/10.26782/jmcms.2020.08.00052)
34. Iyad Katib, "Exhaustive Search For Optimal Offline Spectrum Assignment In Elastic Optical Networks", *International Journal Of Computers Communications & Control*, vol: 15, 2020.
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35. Ebtesam Alomari, Iyad Katib, Rashid Mehmood, "Iktishaf: A Big Data Road-Traffic Event Detection Tool Using Twitter And Spark Machine Learning", *Mobile Networks And Applications*, 2020.
DOI: [10.1007/s11036-020-01635-y](https://doi.org/10.1007/s11036-020-01635-y)

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36. Shoayee Alotaibi, Rashid Mehmood, Iyad Katib, Omer Rana, Aiiad Albeshri, "Sehaa: A Big Data Analytics Tool For Healthcare Symptoms And Diseases Detection Using Twitter, Apache Spark, And Machine Learning", Applied Sciences, vol: 10, pp. 1398, 2020.
DOI: [10.3390/app10041398](https://doi.org/10.3390/app10041398)
37. Iyad Katib, "Implementing Median Filter On Heterogeneous Architectures", International Journal Of Computer Applications, vol: 176, pp. 12-15, 2020.
DOI: [10.5120/ijca2020920138](https://doi.org/10.5120/ijca2020920138)
38. Ebtesam Alomari, Rashid Mehmood, Iyad Katib, "Road Traffic Event Detection Using Twitter Data, Machine Learning, And Apache Spark", 2019 Ieee Smartworld, Ubiquitous Intelligence & Computing, Advanced & Trusted Computing, Scalable Computing & Communications, Cloud & Big Data Computing, Internet Of People And Smart City Innovation (Smartworld/Scalcom/Uic/Atc/Cbdcom/Iop/Sci), pp. 1888-1895, 2019.
DOI: [10.1109/SmartWorld-UIC-ATC-SCALC](https://doi.org/10.1109/SmartWorld-UIC-ATC-SCALC)
39. Sardar Usman, Rashid Mehmood, Iyad Katib, Aiiad Albeshri, "Zaki+: A Machine Learning Based Process Mapping Tool For Spmv Computations On Distributed Memory Architectures", Ieee Access, vol: 7, pp. 81279-81296, 2019.
DOI: [10.1109/ACCESS.2019.2923565](https://doi.org/10.1109/ACCESS.2019.2923565)
40. Mahmoud Fayez, Iyad Katib, George N. Rouskas, Tarek F. Gharib, Heba Khaleed, Hossam M. Faheem, "Recursive Algorithm For Selecting Optimum Routing Tables To Solve Offline Routing And Spectrum Assignment Problem", Ain Shams Engineering Journal, 2019.
DOI: [10.1016/j.asej.2019.10.008](https://doi.org/10.1016/j.asej.2019.10.008)
41. Shoayee Alotaibi, Rashid Mehmood, Iyad Katib, "Sentiment Analysis Of Arabic Tweets In Smart Cities: A Review Of Saudi Dialect", 2019 Fourth International Conference On Fog And Mobile Edge Computing (Fmec), pp. 330-335, 2019.
DOI: [10.1109/FMEC.2019.8795331](https://doi.org/10.1109/FMEC.2019.8795331)
42. Muhammad Aqib, Rashid Mehmood, Ahmed Alzahrani, Iyad Katib, Aiiad Albeshri, Saleh M. Altowaijri, "Smarter Traffic Prediction Using Big Data, In-Memory Computing, Deep Learning And Gpus", Sensors, vol: 19, pp. 2206, 2019.
DOI: [10.3390/s19092206](https://doi.org/10.3390/s19092206)
43. Muhammad Aqib, Rashid Mehmood, Ahmed Alzahrani, Iyad Katib, Aiiad Albeshri, Saleh M. Altowaijri, "Rapid Transit Systems: Smarter Urban Planning Using Big Data, In-Memory Computing, Deep Learning, And Gpus", Sustainability, vol: 11, pp. 2736, 2019.
DOI: [10.3390/su11102736](https://doi.org/10.3390/su11102736)
44. Sardar Usman, Rashid Mehmood, Iyad Katib, Aiiad Albeshri, Saleh M. Altowaijri, "Zaki: A Smart Method And Tool For Automatic Performance Optimization Of Parallel Spmv Computations On Distributed Memory Machines", Mobile Networks And Applications, 2019.
DOI: [10.1007/s11036-019-01318-3](https://doi.org/10.1007/s11036-019-01318-3)
45. Thaha Muhammed, Rashid Mehmood, Aiiad Albeshri, Iyad Katib, "Suraa: A Novel Method And Tool For Loadbalanced And Coalesced Spmv Computations On Gpus", Applied Sciences, vol: 9, pp. 947, 2019.
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46. Furqan Alam, Rashid Mehmood, Iyad Katib, Saleh M. Altowaijri, Aiiad Albeshri, "Taawun: A Decision Fusion And Feature Specific Road Detection Approach For Connected Autonomous Vehicles", Mobile Networks And Applications, 2019.
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47. Furqan Alam, Rashid Mehmood, Iyad Katib, "Comparison Of Decision Trees And Deep Learning For Object Classification In Autonomous Driving", pp. 135-158, 2019.
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49. Mahmoud Fayez, Iyad Katib, George Rouskas, Tarek F. Gharib, Heba Khaled, Hossam Faheem, "Performance Evaluation Of Brute Force Techniques For Routing And Spectrum Assignment In Elastic Optical Network Using Mpi And Cuda", 2018 International Conference On Computational Science And Computational Intelligence (Csci), pp. 1422-1426, 2018.
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50. Samar A. Alzahrani, Iyad A. Katib, "Impact Of Varying Ip/Mpls Capacity Module'S Size In Three-Layer Networks", 2018 Ieee 8th Annual Computing And Communication Workshop And Conference (CcwC), pp. 959-964, 2018.
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51. Ahmed Eleliemy, Mahmoud Fayze, Rashid Mehmood, Iyad Katib, Naif Aljohani, "Loadbalancing On Parallel Heterogeneous Architectures: Spin-Image Algorithm On Cpu And Mic", Proceedings Of The 9th Eurosim Congress On Modelling And Simulation, Eurosim 2016, The 57th Sims Conference On Simulation And Modelling Sims 2016, pp. 673-679, 2018.
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52. Thaha Muhammed, Rashid Mehmood, Aiiad Albeshri, Iyad Katib, "Ubehealth: A Personalized Ubiquitous Cloud And Edge-Enabled Networked Healthcare System For Smart Cities", Ieee Access, vol: 6, pp. 32258-32285, 2018.
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53. Shireesh Bhat, George N. Rouskas, Iyad Katib, "On Time Dependent Routing Algorithms For Open Marketplaces Of Path Services With Support For In-Advance Path Reservation", Computer Networks, vol: 138, pp. 201-212, 2018.
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56. Yasir Arfat, Muhammad Aqib, Rashid Mehmood, Aiiad Albeshri, Iyad Katib, Nasser Albogami, Ahmed Alzahrani, "Enabling Smarter Societies Through Mobile Big Data Fogs And Clouds", Procedia Computer Science, vol: 109, pp. 1128-1133, 2017.
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58. Furqan Alam, Rashid Mehmood, Iyad Katib, Nasser N. Albogami, Aiiad Albeshri, "Data Fusion And Iot For Smart Ubiquitous Environments: A Survey", Ieee Access, vol: 5, pp. 9533-9554, 2017.
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59. Mohsin Khan, Maaz Ahmed, Waseem Ahmed, Rashid Mehmood, Abdullah Algarni, Aiiad Albeshri, Iyad Katib, "Loop Block Profiling With Performance Prediction", International Journal Of Computer Trends And Technology, vol: 47, pp. 199-204, 2017.
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62. Sahar Talebi, George N. Rouskas, Iyad Katib, "Offline Distance-Adaptive Routing And Spectrum Assignment In Mesh Elastic Optical Networks", Globecom 2016 - 2016 Ieee Global Communications Conference, pp. 1-6, 2016.
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63. Heba Khaled, H. M. Faheem, Mahmoud Fayez, Iyad Katib, Naif R. Aljohani, "Performance Improvement Of The Parallel Smith Waterman Algorithm Implementation Using Hybrid Mpi-Openmp Model", 2016 Sai Computing Conference (Sai), pp. 1232-1234, 2016.
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64. Furqan Alam, Rashid Mehmood, Iyad Katib, Aiiad Albeshri, "Analysis Of Eight Data Mining Algorithms For Smarter Internet Of Things (Iot)", Procedia Computer Science, vol: 98, pp. 437-442, 2016.
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