

## Academic Resume



### Salma Kammoun

#### Associate Professor, Computer Science Department

Associate Professor, Program Director of the Executive Master in Cybersecurity, Internal Auditor of Quality Assurance of Higher Education, and Head of the of Development and Quality Committee at CS Department, FCIT, KAU, KSA. She is a primary investigator of many research projects in Artificial Intelligence, reviewer in international conferences/journals, educational programs, and research projects. She is a member of many development and accreditation committees of educational programs.

#### Contact Information.

Building 61, Room 105, smohamad1@kau.edu.sa.

#### Highest Degree.

2013, Phd. in computer science, Computer Vision, University of Sfax, Tunisia.

#### Academic and Professional Experiences.

1. **2024 - Present**  
Consultant, KAU Digital Transformation Center, , .
2. **2023 - Present**  
Member, Academic Accreditation committee (ABET), FCIT, King Abdulaziz University.
3. **2022 - Present**  
Member, NCAAA SSRP subcommittee (Writer Teaching and Learning Standard), Computer Science Department, FCIT, King Abdulaziz University.
4. **2022 - Present**  
Coordinator, CS Academic Accreditation Steering Committee, Computer Science Department, FCIT, King Abdulaziz University.
5. **2022 - Present**  
Consultant, CS Academic Advising Committee, Computer Science Department, Female Section, FCIT, King Abdulaziz University.
6. **2022 - Present**  
Internal Auditor in Quality Assurance of Higher Education, FCIT, King Abdulaziz University.
7. **2021 - Present**  
Member, CS NCAAA Academic Accreditation Committee, Computer Science Department, FCIT, King Abdulaziz University.
8. **2020 - Present**  
Member, FCIT Committee of Executive Programs, FCIT, King Abdulaziz University.
9. **2019 - Present**  
Associate Professor in computer science, Faculty of Computing and Information Technology, King Abdulaziz University, Jeddah, Saudi Arabia. Teaching undergraduate and graduate courses, Supervisor of Seniors projects, Master and PHD projects, KAU, FCIT.

Last Profile Update: May 09, 2024

## Academic and Professional Experiences.

10. **2017 - Present**  
Member, Academic Accreditation Committee (ABET), Computer Science Department, FCIT, King Abdulaziz University.
11. **2015 - 2022**  
Head of CS Academic Advising Committee, Computer Science Department, FCIT, King Abdulaziz University.
12. **2014 - 2019**  
Assistant Professor in computer science, Faculty of Computing and Information Technology, King Abdulaziz University, Jeddah, Saudi Arabia.
13. **2012 - 2014**  
Assistant Professor in computer science, National School of Engineers of Monastir - Tunisia, , .
14. **2009 - 2012**  
Secondary School Professor in computer science, Higher Institute of Sport and Physical Education of Sfax - Tunisia, , .
15. **2007 - 2009**  
Secondary School Professor Sfax- Tunisia., , .
16. **2005 - 2007**  
Web and Multimedia Developer, EnjoyGraph Communication Sfax- Tunisia (Part Time), , .
17. **2005 - 2007**  
Temporary Assistant in computer science, Faculty of Sciences of Sfax - Tunisia., , .
18. **2003 - 2004**  
Web Developer, Research and Documentation Center (ISSEPS) & Tunisia (Part Time), , .

## Research Interests.

Image and video processing, Computer Vision and Embedded Systems, Artificial Intelligence and Machine Learning, Cybersecurity.

## Teaching Interests.

Computer Vision, Computer Graphics, Operating Systems, Cybersecurity Fundamentals, Cybersecurity policies, Applied Cybersecurity.

## Certifications and Trainings.

1. EMC Academic Associate, Data Science and Big Data Analytics.
2. CISCO Academic Associate : ITE, CCNA and Cybersecurity Operations.
3. Professional Certificate in Quality Assurance of Higher Education.

## Social, Scientific and Professional Affiliation.

1. 2007-Present, Researcher Member, MIRACL: Multimedia, InfoRmation Systems and Advanced Computing Laboratory.
2. 2020-2021, Member, Executive Master of Artificial Intelligence (Elaborating the Master Curriculum), CS Department.
3. 2018-2019, Applied Diploma of Software Engineering (Elaborating the Diploma Curriculum), CS Department.
4. 2022-2023, Head of Committee, Student and Graduates Affairs - Cs Department.
5. 2015-2022, Operating Systems Course Coordinator, Computer Science Department, FCIT, King Abdulaziz University.
6. 2020-Present, Program Director, Executive Master In Cybersecurity- CS Department.
7. 2023-Present, Head of Development and Quality Committee, CS Department.

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8. 2015-2022, Head of Academic Advising, Computer Science Department, FCIT, King Abdulaziz University.
9. 2017-2019, Member, Quality Assurance of senior project committee, Computer Science Department, FCIT, King Abdulaziz University.
10. 2022-Present, Member of Academic Accreditation Steering Committee, Computer Science Department, FCIT, King Abdulaziz University.
11. 2020-2023, Member, FCIT Academic Committee of Executive programs, FCIT, King Abdulaziz University.
12. 2017-2018, Member, Academic Accreditation committee (ABET), Computer Science Department, FCIT, King Abdulaziz University.
13. 2014-2015, Member of Scientific committee of Sixth Scientific Forum for KAU students, King Abdulaziz University.

### **Excellence Awards and Patents.**

1. 2020, Interior, Best Academic Supervisor, KAU.
2. 2022, International, Best Senior Project, DELL EMC.
3. 2021, Interior, Makkah Digital Gate Initiatives, Emirate of Makkah Province and King Abdulaziz University.

### **Funded Projects.**

1. 2016, Project CMCU DEFI (N 34882WK): Demographic Estimation from Facial Images, Ecole Centrale de Lyon & Telcom Lille (France); ENSI, ENIS & FSS (Tunisia), 2016-2019.
2. 2015, 611-975-D1435: Adaptive Moving Shadow Detection and Removal by a New Semi-Supervised Learning Technique, &bull; Deanship of Scientific Research (DSR), KAU, 2015-2018.
3. 2019, DF-351-165-1441: Deep Multi-Layer Perceptron-based Obstacle Classification Method from Partial Visual Information: Application to the Assistance of Visually Impaired People, Deanship of Scientific Research (DSR), KAU, 2019-2020.
4. 2020, MDP-IRI-8-2020: Development of interactive e-learning systems based on the multi-modal analysis of academic engagement of students, &bull; Makkah Digital Gate Initiatives Emirate of Makkah Province and King Abdulaziz University, 2020-2021.
5. 2020, Adaptive Feedbacks in online sessions based on multimodal analysis of student academic engagement and practices, IFPRC-054-612-2020, Institutional Funding Program for Research and Development,
6. 2019, Autistic Children Compound Emotion Recognition during Meltdown Crisis based on Spatio-Temporal Analysis of Facial Compound Emotion, &bull; Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, grant No DF-350-165-1441
7. 2019, Abnormal Crowd behavior detection based on Deep Semi-Supervised Learning, &bull; Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, grant No DF-352-165-1441

## Publications.

1. Salma Kammoun Jarraya, Alaa Atallah Almazroey, "Video-Based Domain Generalization For Abnormal Event And Behavior Detection", International Journal Of Advanced Computer Science And Applications, vol: 15, 2024.  
DOI: [10.14569/IJACSA.2024.01503129](https://doi.org/10.14569/IJACSA.2024.01503129)
2. Reem Ahmed Bahathiq, Haneen Banjar, Salma Kammoun Jarraya, Ahmed K. Bamaga, Rahaf Almoallim, "Efficient Diagnosis Of Autism Spectrum Disorder Using Optimized Machine Learning Models Based On Structural Mri", Applied Sciences, Impact Factor:2.7, vol: 14, pp. 473, 2024.  
DOI: [10.3390/app14020473](https://doi.org/10.3390/app14020473)
3. Raoudha Nouisser, Salma Kammoun Jarraya, Mohamed Hammami, "A Review Of Vision-Based Abnormal Human Activity Analysis For Elderly Emergency Detection", 2023 International Conference On Innovations In Intelligent Systems And Applications (Inista), pp. 1-6, 2023.  
DOI: [10.1109/INISTA59065.2023.10310327](https://doi.org/10.1109/INISTA59065.2023.10310327)
4. Raoudha Nouisser, Salma Kammoun Jarraya, Mohamed Hammami, "Human Activity Dataset Of Top Frequent Elderly Emergencies For Monitoring Applications Using Kinect", 2023 Ieee 47th Annual Computers, Software, And Applications Conference (Compsac), pp. 260-267, 2023.  
DOI: [10.1109/COMPSAC57700.2023.00040](https://doi.org/10.1109/COMPSAC57700.2023.00040)
5. Allinjawy Arwa, Altuwairqi Khawlah, Kammoun Jarraya Salma, Abuzinadah Nihal, Alkhuraiji Samar, "Cnn-Based Face Emotion Detection And Mouse Movement Analysis To Detect Student's Engagement Level", vol: 637, pp. 604-626, 2023.  
DOI: [10.1007/978-3-031-26384-2\\_53](https://doi.org/10.1007/978-3-031-26384-2_53)
6. Shoroog Ghazee Khenkar, Salma Kammoun Jarraya, Arwa Allinjawy, Samar Alkhuraiji, Nihal Abuzinadah, Faris A. Kateb, "Deep Analysis Of Student Body Activities To Detect Engagement State In E-Learning Sessions", Applied Sciences, vol: 13, pp. 2591, 2023.  
DOI: [10.3390/app13042591](https://doi.org/10.3390/app13042591)
7. Taima Alrimy Taima Alrimy, "Facial Expression Recognition Based On Well- Known Convnet Architectures", Journal Of King Abdulaziz University Computing And Information Technology Sciences, vol: 11, pp. 33-43, 2022.  
DOI: [10.4197/Comp.11-2.3](https://doi.org/10.4197/Comp.11-2.3)
8. Fatima Al-Rammah, Marwa Masmoudi, Salma Kammoun Jarraya, "Cnn-Lstm Based Approach For Analyzing And Detecting Stereotypical Motor Movements Of Autistic Children In Pre-Meltdown Crisis", 2022 Ieee/Acs 19th International Conference On Computer Systems And Applications (Aiccsa), pp. 1-8, 2022.  
DOI: [10.1109/AICCSA56895.2022.10017965](https://doi.org/10.1109/AICCSA56895.2022.10017965)
9. Raoudha Nouisser, Salma Kammoun Jarraya, Mohamed Hammami, "Deep Learning And Kinect Skeleton-Based Approach For Fall Prediction Of Elderly Physically Disabled", 2022 Ieee/Acs 19th International Conference On Computer Systems And Applications (Aiccsa), pp. 1-7, 2022.  
DOI: [10.1109/AICCSA56895.2022.10017495](https://doi.org/10.1109/AICCSA56895.2022.10017495)
10. Reem Ahmed Bahathiq, Haneen Banjar, Ahmed K. Bamaga, Salma Kammoun Jarraya, "Machine Learning For Autism Spectrum Disorder Diagnosis Using Structural Magnetic Resonance Imaging: Promising But Challenging", Frontiers In Neuroinformatics, vol: 16, 2022.  
DOI: [10.3389/fninf.2022.949926](https://doi.org/10.3389/fninf.2022.949926)
11. Shoroog Khenkar, Salma Kammoun Jarraya, "Engagement Detection Based On Analyzing Micro Body Gestures Using 3d Cnn", Computers, Materials & Continua, vol: 70, pp. 2655-2677, 2022.  
DOI: [10.32604/cmc.2022.019152](https://doi.org/10.32604/cmc.2022.019152)

## Publications.

12. Khawlah Altuwairqi, Salma Kammoun Jarraya, Arwa Allinjaw, Mohamed Hammami, "Student Behavior Analysis To Measure Engagement Levels In Online Learning Environments", *Signal, Image And Video Processing*, vol: 15, pp. 1387-1395, 2021.  
DOI: [10.1007/s11760-021-01869-7](https://doi.org/10.1007/s11760-021-01869-7)
13. Salma Kammoun Jarraya, Maha Hamdan Alotibi, Manar Salamah Ali, "A Deep-Cnn Crowd Counting Model For Enforcing Social Distancing During Covid19 Pandemic: Application To Saudi Arabia???S Public Places", *Computers, Materials & Continua*, vol: 66, pp. 1315-1328, 2021.  
DOI: [10.32604/cmc.2020.013522](https://doi.org/10.32604/cmc.2020.013522)
14. Alaa Atallah Almazroey, Salma Kammoun Jarraya, "Fight Detection In Crowd Scenes Based On Deep Spatiotemporal Features", *Airc"20: 2020 2nd International Conference On Artificial Intelligence, Robotics And Control*, pp. 18-23, 2020.  
DOI: [10.1145/3448326.3448329](https://doi.org/10.1145/3448326.3448329)
15. Salma Kammoun Jarraya, Marwa Masmoudi, Mohamed Hammami, "A Comparative Study Of Autistic Children Emotion Recognition Based On Spatio-Temporal And Deep Analysis Of Facial Expressions Features During A Meltdown Crisis", *Multimedia Tools And Applications*, vol: 80, pp. 83-125, 2020.  
DOI: [10.1007/s11042-020-09451-y](https://doi.org/10.1007/s11042-020-09451-y)
16. Salma Kammoun Jarraya, Marwa Masmoudi, Mohamed Hammami, "Compound Emotion Recognition Of Autistic Children During Meltdown Crisis Based On Deep Spatio-Temporal Analysis Of Facial Geometric Features", *Ieee Access*, vol: 8, pp. 69311-69326, 2020.  
DOI: [10.1109/ACCESS.2020.2986654](https://doi.org/10.1109/ACCESS.2020.2986654)
17. Alaa Atallah Almazroey, Salma Kammoun Jarraya, "Abnormal Events And Behavior Detection In Crowd Scenes Based On Deep Learning And Neighborhood Component Analysis Feature Selection", *Proceedings Of The International Conference On Artificial Intelligence And Computer Vision (Aicv2020)*, *Proceedings Of The International Conference On Artificial Intelligence And Computer Vision (Aicv2020)*, vol: 1153, pp. 258-267, 2020.  
DOI: [10.1007/978-3-030-44289-7\\_25](https://doi.org/10.1007/978-3-030-44289-7_25)
18. Salma Kammoun Jarraya, Wafa Saad Al-Shehri, Manar Salamah Ali, "Deep Multi-Layer Perceptron-Based Obstacle Classification Method From Partial Visual Information: Application To The Assistance Of Visually Impaired People", *Ieee Access*, vol: 8, pp. 26612-26622, 2020.  
DOI: [10.1109/ACCESS.2020.2970979](https://doi.org/10.1109/ACCESS.2020.2970979)
19. Marwa Masmoudi, Salma Kammoun Jarraya, Mohamed Hammami, "Meltdowncrisis: Dataset Of Autistic Children During Meltdown Crisis", *2019 15th International Conference On Signal-Image Technology & Internet-Based Systems (Sitis)*, pp. 239-246, 2019.  
DOI: [10.1109/SITIS.2019.00048](https://doi.org/10.1109/SITIS.2019.00048)
20. Maha Hamdan Alotibi, Salma Kammoun Jarraya, Manar Salamah Ali, Kawthar Moria, "Cnn-Based Crowd Counting Through Iot: Application For Saudi Public Places", *Procedia Computer Science*, vol: 163, pp. 134-144, 2019.  
DOI: [10.1016/j.procs.2019.12.095](https://doi.org/10.1016/j.procs.2019.12.095)
21. Mona Saleh Alzahrani, Salma Kammoun Jarraya, Han??ne Ben-Abdallah, Manar Salamah Ali, "Comprehensive Evaluation Of Skeleton Features-Based Fall Detection From Microsoft Kinect V2", *Signal, Image And Video Processing*, 2019.  
DOI: [10.1007/s11760-019-01490-9](https://doi.org/10.1007/s11760-019-01490-9)
22. Manal Abdulaziz Alshehri, Salma Kammoun Jarray, "Comprehensive Evaluation Of Static And Dynamic Obstacle Detection Method For Safe Navigation Of The Visually Impaired People", *Journal Of Electronic Imaging*, vol: 28, pp. 1, 2019.  
DOI: [10.1117/1.JEI.28.1.013024](https://doi.org/10.1117/1.JEI.28.1.013024)

## Publications.

23. Khawlah Altuwairqi, Salma Kammoun Jarraya, Arwa Allinjaw, Mohamed Hammami, "A New Emotion-Based Affective Model To Detect Student's Engagement", Journal Of King Saud University - Computer And Information Sciences, 2018.  
DOI: [10.1016/j.jksuci.2018.12.008](https://doi.org/10.1016/j.jksuci.2018.12.008)
24. Salma Kammoun Jarraya, "A Method For Tracking Road Objects", The International Journal Of Multimedia & Its Applications, vol: 10, pp. 01-15, 2018.  
DOI: [10.5121/ijma.2018.10501](https://doi.org/10.5121/ijma.2018.10501)
25. Wafa Saad Al-shehri, Salma Kammoun Jarraya, Manar Salama Ali, "Vision-Based Distance Estimation Method Using Single Camera: Application To The Assistance Of Visually Impaired People", vol: 111, pp. 679-686, 2018.  
DOI: [10.1007/978-3-030-03577-8\\_74](https://doi.org/10.1007/978-3-030-03577-8_74)
26. Mona Saleh Alzahrani, Salma Kammoun Jarraya, Manar Salamah Ali, Hanene Ben-Abdallah, "Watchful-Eye: A 3d Skeleton-Based System For Fall Detection Of Physically-Disabled Cane Users", vol: 247, pp. 107-116, 2018.  
DOI: [10.1007/978-3-319-98551-0\\_13](https://doi.org/10.1007/978-3-319-98551-0_13)
27. Mona Saleh Alzahrani, Salma Kammoun Jarraya, Manar Ali Salamah, Hanene Ben-Abdallah, "Fallfree: Multiple Fall Scenario Dataset Of Cane Users For Monitoring Applications Using Kinect", 2017 13th International Conference On Signal-Image Technology & Internet-Based Systems (Sitis), pp. 327-333, 2017.  
DOI: [10.1109/SITIS.2017.61](https://doi.org/10.1109/SITIS.2017.61)
28. Mona Alzahrani, Salma Kammoun, "Human Activity Recognition: Challenges And Process Stages", International Journal Of Innovative Research In Computer And Communication Engineering, Vol. 4, Issue 5, May 2016, 2016.
29. Manal Abdulaziz Alshehri, Salma Kammoun Jarraya, Hanene Ben-Abdallah, "A Mobile-Based Obstacle Detection Method: Application To The Assistance Of Visually Impaired People", vol: 9950, pp. 555-564, 2016.  
DOI: [10.1007/978-3-319-46681-1\\_66](https://doi.org/10.1007/978-3-319-46681-1_66)
30. Shoroog Khenkar, Hanan Alsulaiman, Shahad Ismail, Alaa Fairaq, Salma Kammoun Jarraya, Hanene Ben-Abdallah, "Envision: Assisted Navigation Of Visually Impaired Smartphone Users", Procedia Computer Science, vol: 100, pp. 128-135, 2016.  
DOI: [10.1016/j.procs.2016.09.132](https://doi.org/10.1016/j.procs.2016.09.132)
31. Salma Kammoun Jarraya, Emna Fendri, Mohamed Hammami, Hanene Ben-Abdallah, "Combined Mpeg7 Color Descriptors For Image Classification: Bypassing The Training Phase", vol: 9117, pp. 735-742, 2015.  
DOI: [10.1007/978-3-319-19390-8\\_82](https://doi.org/10.1007/978-3-319-19390-8_82)
32. Salma Kammoun Jarraya, Mohamed Hammami, Hanene Ben-Abdallah, "Adaptive Moving Shadow Detection And Removal By New Semi-Supervised Learning Technique", Multimedia Tools And Applications, 2015.  
DOI: [10.1007/s11042-015-2818-8](https://doi.org/10.1007/s11042-015-2818-8)
33. Salma Kammoun Jarraya, Mohamed Hammami and Hanene Ben Abdallah, "Comparative Evaluation Of Moving Pixel Detection Approaches", The Fifth Edition Of The International Conference On Web And Information Technologies (Icwit&#039;&#039;13),195-204, March 2013, Hammamet, Tunisia, 2013.
34. Salma Kammoun Jarraya, Najla Bouarada Ghrab, Mohamed Hammami, Hanene Ben-Abdallah, "Tracking Moving Objects In Road Traffic Sequences", vol: 7340, pp. 406-414, 2012.  
DOI: [10.1007/978-3-642-31254-0\\_46](https://doi.org/10.1007/978-3-642-31254-0_46)

## Publications.

35. Salma Kammoun Jarraya, Rania Rebai Boukhriss, Mohamed Hammami, Hanene Ben-Abdallah, "Cast Shadow Detection Based On Semi-Supervised Learning", vol: 7324, pp. 19-26, 2012.  
DOI: [10.1007/978-3-642-31295-3\\_3](https://doi.org/10.1007/978-3-642-31295-3_3)
36. Mohamed Hammami -, Salma Kammoun Jarraya -, and Hanene BenAbdallah -, "A Comparative Study Of Proposed Moving Object Detection Methods", Journal Of Next Generation Information Technology, vol: 2, pp. 56-68, 2011.  
DOI: [10.4156/jnit.vol2.issue2.8](https://doi.org/10.4156/jnit.vol2.issue2.8)
37. , "Roadguard - Highway Control And Management System", International Conference On Computer Vision Theory And Applications, pp. 632-637, 2011.  
DOI: [10.5220/0003369406320637](https://doi.org/10.5220/0003369406320637)
38. Mohamed Hammami, Salma Kammoun Jarraya, Hanene Ben-Abdallah, "On Line Background Modeling For Moving Object Segmentation In Dynamic Scenes", Multimedia Tools And Applications, vol: 63, pp. 899-926, 2011.  
DOI: [10.1007/s11042-011-0935-6](https://doi.org/10.1007/s11042-011-0935-6)
39. S.K. Jarraya, M. Hammami, H. Ben-Abdallah, "An Improved Hybrid Method For Moving Object Detection", Signal And Image Processing, 2010.  
DOI: [10.2316/P.2010.710-019](https://doi.org/10.2316/P.2010.710-019)
40. Salma Kammoun Jarraya, Mohamed Hammami, Hanene Ben-Abdallah, "Accurate Background Modeling For Moving Object Detection In A Dynamic Scene", 2010 International Conference On Digital Image Computing: Techniques And Applications (Dicta), pp. 52-57, 2010.  
DOI: [10.1109/DICTA.2010.18](https://doi.org/10.1109/DICTA.2010.18)