

JAMIL AHMAD

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<https://scholar.google.com.pk/citations?user=7dw-9YgAAAAJ&hl=en> ·

Contribute towards the wellbeing of others through progressive research & development activities.

EXPERIENCE

OCT 2008 – TO DATE

LECTURER, ISLAMIA COLLEGE PESHAWAR

Engaged in teaching and R&D activities, student counseling, and research guidance

FEB 2008 – APR 2009

SOFTWARE DEVELOPER, PAKISTAN AIR FORCE

Developed e-Engineering Management System (e-EMS), Vehicle Management System, and Personnel Management System.

EDUCATION

FEB 2018

PHD (COMPUTER SCIENCE), SEJONG UNIVERSITY, SEOUL, SOUTH KOREA

Best Researcher Award

CGPA: 4.40/4.5

Thesis Title: Salient Convolutional Features to Binary Hash Codes for Efficient Image Retrieval

MAY 2014

MS (COMPUTER SCIENCE), ISLAMIA COLLEGE PESHAWAR

CGPA: 3.75/4.0 (85% - Top Position holder)

Thesis Title: "Object Representation and Recognition using the Fusion of Structural and Statistical Shape Features"

DEC 2007

BCS (HONORS), UNIVERSITY OF PESHAWAR

CGPA: 3.9/4.0 (91.2% - Top Position holder)

AUG 2003

HSSC (COMPUTER SCIENCE GROUP), ISLAMIA COLLEGE PESHAWAR

MARKS OBTAINED: 817 out of 1100 (74.3 % - Grade: A)

MAY 2001

SSC (SCIENCE GROUP), F.G BOYS PUBLIC HIGH SCHOOL PESHAWAR CANTT.

MARKS OBTAINED: 698 OUT OF 850 (82.2 % - GRADE: A1)

SKILLS

- Attentive, Energetic and Diligent
- Excellent programming logic (solution oriented thinking)
- Programming regularly since 2002
- Image Processing in MATLAB, OpenCV, Python
- Machine Learning & Deep Learning with Caffe, Tensorflow
- Simulations & experimentations in MATLAB
- Graphics programming in OpenGL with GCC
- Desktop Applications in C/C++, Python, Java, Visual Basic & Microsoft.Net
- Low level programming in Assembly Language
- Database Development (SQL Server, Oracle)
- Web Technologies (PHP, JavaScript, VBScript, ASP,ASP.Net,AJAX)

FUNDED PROJECTS:

1. Assisting Farmers in Plant Disease Detection and Treatment at Early Stages using Smart Phone Application (Funded by: Sustainable Development Unit, P&D Dept. Govt of KP)
Role: Co-Principal Investigator
2. Development of a solution for situation-awareness based on the analysis of speech and environmental sounds (Funded by: National Research Foundation of Korea)
Role: Team Member
3. Efficient content-based image retrieval system using deep features and hash codes (Funded by: Sejong University & National Research Foundation of Korea)
Role: Principal Investigator
4. **E-Engineering Management System:** A client-server desktop system for managing heavy data, performing analysis and creating reports was developed for PAF Base Peshawar from Apr-2008 to Feb 2009. (VB + SQL Server) (Funded by: Pakistan Air Force, Peshawar)
Role: Lead Developer
5. **Mechanical Transport System:** A desktop software for managing PAF vehicles related data and creating daily and monthly reports was developed for MT SQN PAF Base Peshawar. (VB + Access) (Funded by: Pakistan Air Force, Peshawar)
Role: Lead Developer
6. **Base Management System:** Client Server system for Pakistan Air Force base Peshawar for the management and monitoring of overall resources available on the base. (VB) (Funded by: Pakistan Air Force, Peshawar)
Role: Lead Developer

JOURNAL PUBLICATIONS

1. **Jamil Ahmad**, Khan Muhammad, Imran Ahmad, Wakeel Ahmad, Melvyn L. Smith, Lyndon N. Smith, Deepak Kumar Jain, Haoxiang Wang, Irfan Mehmood: *Visual features based boosted classification of weeds for real-time selective herbicide sprayer systems*. **Computers in Industry** 06/2018; 98(June)., DOI:10.1016/j.compind.2018.02.005
2. Khan Muhammad, **Jamil Ahmad**, Zhihan Lv, Paolo Bellavista, Po Yang, Sung Wook Baik: *Efficient deep CNN-based fire detection and localization in video surveillance applications*. **IEEE Transactions on Systems, Man, and Cybernetics: Systems** 03/2018;

3. Khan Muhammad, **Jamil Ahmad**, Irfan Mehmood, Seungmin Rho, Sung Wook Baik: *Convolutional Neural Networks based Fire Detection in Surveillance Videos*. **IEEE Access** 03/2018; PP(99):1-1., DOI:10.1109/ACCESS.2018.2812835
4. **Jamil Ahmad**, Khan Muhammad, Sung Wook Baik: *Medical Image Retrieval with Compact Binary Codes Generated in Frequency Domain Using Highly Reactive Convolutional Features*. **Journal of Medical Systems** 02/2018; 42(2)., DOI:10.1007/s10916-017-0875-4
5. **Jamil Ahmad**, Khan Muhammad, Jaime Lloret, Sung Wook Baik: *Efficient Conversion of Deep Features to Compact Binary Codes using Fourier Decomposition for Multimedia Big Data*. **IEEE Transactions on Industrial Informatics** 01/2018; PP(99):1-1., DOI:10.1109/TII.2018.2800163
6. Khan Muhammad, Rafik Hamza, **Jamil Ahmad**, Jaime Lloret, Harry Haoxiang Ge Wang, Sung Wook Baik: *Secure Surveillance Framework for IoT systems using Probabilistic Image Encryption*. **IEEE Transactions on Industrial Informatics** 01/2018; PP(99):1-1., DOI:10.1109/TII.2018.2791944
7. Khan Muhammad, **Jamil Ahmad**, Sung Wook Baik: *Early Fire Detection using Convolutional Neural Networks during Surveillance for Effective Disaster Management*. **Neurocomputing** 12/2017;, DOI:10.1016/j.neucom.2017.04.083
8. **Jamil Ahmad**, Khan Muhammad, Mi Young Lee, Sung Wook Baik: *Endoscopic Image Classification and Retrieval using Clustered Convolutional Features*. **Journal of Medical Systems** 12/2017; 41(12)., DOI:10.1007/s10916-017-0836-y
9. Amin Ullah, **Jamil Ahmad**, Khan Muhammad, Muhammad Sajjad, Sung Wook Baik: *Action Recognition in Video Sequences using Deep Bi-directional LSTM with CNN Features*. **IEEE Access** 11/2017; PP(99):1-1., DOI:10.1109/ACCESS.2017.2778011
10. **Jamil Ahmad**, Khan Muhammad, Sambit Bakshi, Sung Wook Baik: *Object-oriented convolutional features for fine-grained image retrieval in large surveillance datasets*. **Future Generation Computer Systems** 11/2017;, DOI:10.1016/j.future.2017.11.002
11. Abdul Malik Badshah, Nasir Rahim, Noor Ullah, **Jamil Ahmad**, Khan Muhammad, Mi Young Lee, Soonil Kwon, Sung Wook Baik: *Deep features-based speech emotion recognition for smart affective services*. **Multimedia Tools and Applications** 10/2017;, DOI:10.1007/s11042-017-5292-7
12. **Jamil Ahmad**, Khan Muhammad, Sung Wook Baik: *Data augmentation-assisted deep learning of hand-drawn partially colored sketches for visual search*. **PLoS ONE** 08/2017; 12(8):e0183838., DOI:10.1371/journal.pone.0183838
13. Muhammad Sajjad, Amin Ullah, **Jamil Ahmad**, Naveed Abbas, Seungmin Rho, Sung Wook Baik: *Integrating salient colors with rotational invariant texture features for image representation in retrieval systems*. **Multimedia Tools and Applications** 08/2017;, DOI:10.1007/s11042-017-5010-5
14. **Jamil Ahmad**, Muhammad Sajjad, Irfan Mehmood, Sung Wook Baik: *SiNC: Saliency-injected neural codes for representation and efficient retrieval of medical radiographs*. **PLoS ONE** 08/2017; 12(8):e0181707., DOI:10.1371/journal.pone.0181707
15. Haleem Farman, Huma Javed, Bilal Jan, **Jamil Ahmad**, Shaukat Ali, Falak Naz Khalil, Murad Khan: *Analytical network process based optimum cluster head selection in wireless sensor network*. **PLoS ONE** 07/2017; 12(7-7):e0180848., DOI:10.1371/journal.pone.0180848
16. Amin Ullah, **Jamil Ahmad**, Khan Muhammad, Irfan Mehmood, Mi Young Lee, Jun Ryeol Park, Sung Wook Baik: *Action Recognition in Movie Scenes using Deep Features of Keyframes*. **Journal of the Korean Institute of Next Generation Computing**
17. **Jamil Ahmad**, Irfan Mehmood, Seungmin Rho, Naveen Chilamkurti, Sung Wook Baik: *Embedded deep vision in smart cameras for multi-view objects representation and retrieval*. **Computers & Electrical Engineering** 06/2017;, DOI:10.1016/j.compeleceng.2017.05.033
18. Amin Ullah, Nasir Rahim, **Jamil Ahmad**, Mi Young Lee, Sung Wook Baik: *Analyzing Pedestrian Parts using Deep Features for Person Re-Identification*. **Journal of the Korean Institute of Next Generation Computing**

19. Khan Muhammad, **Jamil Ahmad**, Seungmin Rho, Sung Wook Baik: *Image steganography for authenticity of visual contents in social networks*. **Multimedia Tools and Applications** 02/2017;; DOI:10.1007/s11042-017-4420-8
20. **Jamil Ahmad**, Irfan Mehmood, Sung Wook Baik: *Efficient Object-based Surveillance Image Search using Spatial Pooling of Convolutional Features*. **Journal of Visual Communication and Image Representation** 02/2017; 45., DOI:10.1016/j.jvcir.2017.02.010
21. Khan Muhammad, **Jamil Ahmad**, Muhammad Sajjad, Sung Wook Baik: *Visual saliency models for summarization of diagnostic hysteroscopy videos in healthcare systems*. **SpringerPlus** 12/2016; 5(1)., DOI:10.1186/s40064-016-3171-8
22. **Jamil Ahmad**, Muhammad Sajjad, Seungmin Rho, Soon-il Kwon, Mi Young Lee, Sung Wook Baik: *Determining speaker attributes from stress-affected speech in emergency situations with hybrid SVM-DNN architecture*. **Multimedia Tools and Applications** 10/2016;; DOI:10.1007/s11042-016-4041-7
23. Haleem Farman, Huma Javed, **Jamil Ahmad**, Bilal Jan, Muhammad Zeeshan: *Grid-Based Hybrid Network Deployment Approach for Energy Efficient Wireless Sensor Networks*. **Journal of Sensors** 10/2016; 2016(3):1-14., DOI:10.1155/2016/2326917
24. **Jamil Ahmad**, Zahoor Jan, Khan Muhammad: *Exploiting angular profiles signature for shape-based image classification and retrieval*. **International Journal of Applied Pattern Recognition** 10/2016; 3(3):276., DOI:10.1504/IJAPR.2016.10000657
25. **Jamil Ahmad**, Muhammad Sajjad, Zahoor Jan, Irfan Mehmood, Seungmin Rho, Sung Wook Baik: *Analysis of interaction trace maps for active authentication on smart devices*. **Multimedia Tools and Applications** 04/2016; 76(3)., DOI:10.1007/s11042-016-3450-y
26. Khan Muhammad, **Jamil Ahmad**, Naeem Ur Rehman, Zahoor Jan, Muhammad Sajjad: *CISSKA-LSB: color image steganography using stego key-directed adaptive LSB substitution method*. **Multimedia Tools and Applications** 04/2016; 76(6)., DOI:10.1007/s11042-016-3383-5
27. **Jamil Ahmad**, Muhammad Sajjad, Seungmin Rho, Sung Wook Baik: *Multi-scale local structure patterns histogram for describing visual contents in social image retrieval systems*. **Multimedia Tools and Applications** 03/2016; 75(20)., DOI:10.1007/s11042-016-3436-9
28. Zanooby N. Khan, Rashid Jalal Qureshi, **Jamil Ahmad**: *On Feature based Delaunay Triangulation for Palmprint Recognition*. **Journal of Platform Technology**
29. **Jamil Ahmad**, Mustansar Fiaz, Soon-il Kwon, Maleerat Sodanil, Bay Vo, Sung Wook Baik: *Gender Identification using MFCC for Telephone Applications - A Comparative Study*.
30. Khan Muhammad, **Jamil Ahmad**, Haleem Farman, Zahoor Jan: *A New Image Steganographic Technique using Pattern based Bits Shuffling and Magic LSB for Grayscale Images*. **Technical Journal UET Taxila**
31. **Jamil Ahmad**, Muhammad Sajjad, Irfan Mehmood, Seungmin Rho, Sung Wook Baik: *Saliency-weighted graphs for efficient visual content description and their applications in real-time image retrieval systems*. **Journal of Real-Time Image Processing** 11/2015;; DOI:10.1007/s11554-015-0536-0
32. Khan Muhammad, **Jamil Ahmad**, Muhammad Sajjad, Muhammad Zubair: *Secure Image Steganography using Cryptography and Image Transposition*.
33. Khan Muhammad, Zahoor Jan, **Jamil Ahmad**, Zahid Khan: *An Adaptive Secret Key-directed Cryptographic Scheme for Secure Transmission in Wireless Sensor Networks*.
34. Khan Muhammad, **Jamil Ahmad**, Haleem Farman, Zahoor Jan, Muhammad Sajjad, Sung Wook Baik: *A Secure Method for Color Image Steganography using Gray-Level Modification and Multi-level Encryption*. **KSII Transactions on Internet and Information Systems** 05/2015; 9(5):1938-1962.
35. Irfan Ahmad, Zahoor Jan, Inayat Ali Shah, **Jamil Ahmad**: *Hand Recognition using Palm and Hand Geometry Features*. **Science International-Lahore**
36. Shaukat Ali, Azhar Rauf, **Jamil Ahmad**: *Protecting Unauthorized Big Data Analysis Using Attribute (Data) Relationship*. **Science International-Lahore**

37. Khan Muhammad, **Jamil Ahmad**, Haleem Farman, Muhammad Zubair: *A Novel Image Steganographic Approach for Hiding Text in Color Images using HSI Color Model*. **Middle East Journal of Scientific Research** 12/2014; 22(5):647-654.,
38. **Jamil Ahmad**, Muhammad Sajjad, Irfan Mehmood, Seungmin Rho, Sung Wook Baik: *Describing Colors, Textures and Shapes for Content Based Image Retrieval – A Survey*. **Journal of Platform Technology**
39. Khan Muhammad, **Jamil Ahmad**, Naeem ur Rehman, Zahoor Jan, Rashid Jalal Qureshi: *A Secure Cyclic Steganographic Technique for Color Images using Randomization*. **Technical Journal UET Taxila**
40. **Jamil Ahmad**, Zahoor Jan, Zia ud Din, Shoaib Muhammad Khan: *A Fusion of Labeled-Grid Shape Descriptors with Weighted Ranking Algorithm for Shapes Recognition*. **World Applied Sciences Journal** 03/2014; 31(6):1207-1213., DOI:10.5829/idosi.wasj.2014.31.06.353

PATENTS

1. Sung Wook Baik, **Jamil Ahmad**, Mi Young Lee, Soon il Kwon, Seog Bong Jeon: *APPARATUS AND METHOD FOR GENDER RECOGNITION OF SPEECH DATA*. Ref. No: 1016584520000, Year: 09/2016 (Registered in: **South Korea**)
2. Sung Wook Baik, Khan Muhammad, **Jamil Ahmad**: *METHOD AND APPARATUS FOR RETRIEVING IMAGE USING CONVOLUTION NEURAL NETWORK*. Ref. No: 1019173690000, Year: 11/2018 (Registered in: **South Korea**)

CONFERENCE PROCEEDINGS

1. Amin Ullah, **Jamil Ahmad**, Mi Young Lee, Jin-Taek Kim, Sung Wook Baik: *Face Detection using Selected Feature Maps from a Pre-trained CNN*. The 3rd International Conference on Next Generation Computing(ICNGC2017b), December 21~24, 2017, Kaohsiung, Taiwan; 12/2017
2. Amin Ullah, **Jamil Ahmad**, Khan Muhammad, Mi Young Lee, Byungseok Kang, Oh Beom Soo, Sung Wook Baik: *A Survey on Precision Agriculture: Technologies and Challenges*. The 3rd International Conference on Next Generation Computing(ICNGC2017b), December 21~24, 2017, Kaohsiung, Taiwan; 12/2017
3. Abdul Malik Badshah, **Jamil Ahmad**, Nasir Rahim, Sung Wook Baik: *Speech Emotion Recognition from Spectrograms with Deep Convolutional Neural Network*. 2017 International Conference on Platform Technology and Service (PlatCon); 02/2017, DOI:10.1109/PlatCon.2017.7883728
4. Abdul Malik Badshah, **Jamil Ahmad**, Mi Young Lee, Sung Wook Baik: *Divide-and-Conquer based Ensemble to Spot Emotions in Speech using MFCC and Random Forest*. The 2nd International Integrated Conference & Concert on Convergence, Saint Petersburg State University of Industrial Technologies and Design, Russia; 10/2016
5. **Jamil Ahmad**, Khan Muhammad, Soon-il Kwon, Sung Wook Baik, Seungmin Rho: *Dempster-Shafer Fusion Based Gender Recognition for Speech Analysis Applications*. 2016 International Conference on Platform Technology and Service (PlatCon); 02/2016, DOI:10.1109/PlatCon.2016.7456788
6. Khan Muhammad, **Jamil Ahmad**, Muhammad Sajjad, Seungmin Rho, Sung Wook Baik: *Evaluating the Suitability of Color Spaces for Image Steganography and Its Application in Wireless Capsule Endoscopy*. 2016 International Conference on Platform Technology and Service (PlatCon); 02/2016, DOI:10.1109/PlatCon.2016.7456799
7. Mustansar Fiaz, **Jamil Ahmad**, Khan Muhammad, Mi Young Lee, Jae Hyung Jung, Bon Woo Gu, Jin Woo Choi, Jun Ryeol Park, Jeong Won Lee, Ram Jung, Sung Wook Baik: *Introduction of Virtual Fitness (ViFi) Platform with Realistic Contents*. ECBA- 2015, Bangkok, Thailand; 09/2015

8. **Jamil Ahmad**, Muhammad Sajjad, Irfan Mehmood, Sung Wook Baik: *SSH: Salient Structures Histogram for Content Based Image Retrieval*. 18th IEEE International Conference on Network-Based Information Systems (NBIS 2015), Taipei, Taiwan; 09/2015, DOI:10.1109/NBiS.2015.36
9. Khan Muhammad, Irfan Mehmood, Muhammad Sajjad, **Jamil Ahmad**, Joon Yoo, Dongil Han, Sung Wook Baik: *Secure Visual Content Labeling for Personalized Image Retrieval*. Multimedia Information Technology and Applications (MITA 2015), Tashkent, Uzbekistan; 07/2015, DOI:10.13140/RG.2.1.3900.7206

SCHOLARSHIPS:

- Fully funded scholarship for PhD at Sejong University, Seoul, South Korea (Availed)
- Fully funded scholarship for PhD offered by TWAS-CNPq (Brazil) at Federal University of Rio De Janeiro in 2015 (Not Availed)
- Partially funded Scholarship offered by Scientific and Technological Research Council of Turkey (TUBITAK) for PhD studies in Turkey 2015 (Not Availed)
- 75% Fee waiver Scholarship during BCS (maintained a top position for all semesters in a batch of 100+ students)
- Alumni Scholarship awarded on merit basis during BCS

SEMINARS/WORKSHOPS/CONFERENCES ATTENDED:

- IEEE International Conference on Platform Technology & Service (PlatCon-2017), Jeju, South Korea
- 3rd International Conference on Next Generation Computing (ICNGC-2017), Kaohsiung, Taiwan
- One day seminar on Technology Development Fund (Organized by: HEC) 2018
- One day workshop of Quality Assurance (Organized by: Quality Enhancement Cell, ICP) 2014
- Two-day workshop on Learning Outcomes (Organized by: HEC) 2013

REFERENCES:

1. **Prof. Sung Wook Baik**, Dean, (sbaik@sejong.ac.kr)
College of Software and Convergence Technology, Sejong University, Seoul, South Korea
2. **Prof. Seungmin Rho**, Assistant Professor, (smrho@sungkyul.edu)
Department of Media Software, Sungkyul University, Anyang, South Korea
3. **Dr. Zahoor Jan**, Assistant Professor (zahoor.jan@icp.edu.pk)
Department of Computer Science, Islamia College Peshawar, Pakistan