Md. Haidar Sharif, PhD
Visiting Assistant Professor of Computer Science
St. Mary's College of Maryland, MD, USA
Email: msharif@smcm.edu

Professional Summary:

1. Research and Development ⇒18+ years experience of research and development with various applications/solutions of Machine Learning algorithms with statistical software for analysis of data. 4+ years experience of code optimization. Strong knowledge in design & develop embedded software applications in MATLAB/Simulink environment.

2. Teaching/Training ⇒ 12+ years experience of academic teaching with computer science and engineering at University level (e.g., BSc and MSc).

3. Deep Learning⇒ 6+ years experience of deep learning algorithms R&D.

4. Data Management⇒ 5+ years of experience to implementation of data management standards, policies, and best practices.

5. Ethical Value ⇒ 5+ years of knowledge of regulations and ethical reflections adjacent government use of advanced AI technologies.

6. Key Performance Indicators (KPI) ⇒ 10+ years of experience for creating KPIs and metrics associated with models to measure performance of BSc level students.

7. Knowledge/Tools ⇒ Solid background with Computer Science & Engineering, Probability Theory &Statistics, Python, Sklearn, Pandas, Numpy, Pytorch/TF, Google Colab(*a hosted Jupyter Notebook service*), Jupyter Notebook, R, GitHub, Agile, MATLAB/Simulink, C/C++, OpenCV, Message Passing Interface (MPI), OpenMPI, Visualization Toolkit (VTK),FORTRAN, Microsoft Visual Studio, Perl, Assembly, Jira, MySQL, SQL,Snowflake, Yellowfin, and Tableau using Windows/Unix. Strong background in microprocessors'architectures (e.g., Alpha, Intel, Opteron, etc.).

8. Knowledge and Experience with at least five Completed Projects ⇒ Path Length Simulation, Code Optimization, MIAUCE, MAG113M222, and AI4CITIZENS supported by J. University, Max Planck Society, European Union, Turkish Government, and Research Council of Norway, respectively.

9. Technical Writing ⇒ 20+ years experience of technical writing using LaTeX. Ability to write an original or initial draft specifically for critical review, commentary, and revision.

10. Conceptualization ⇒ Ability to put forward ideas and formulation of comprehensive complete research goals and aims.

11. Methodology ⇒ Ability to develop or design of methodology for creation of models.

12. Software Development⇒ Ability to implement of the computer code and supporting algorithms as well as testing of existing code components.

13. Supervision ⇒ Ability to supervise research activity planning and evaluation.

14. Project Administration ⇒ Ability to manage and coordinate responsibility for the research activity planning and execution.

Education:

PhD in Computer Science
University Lille 1: Sciences and Technologies (USTL), **France**, September 2007 to July 2010

MSc in Computer Engineering
Duisburg-Essen University – Duisburg, **Germany**, April 2004 to March 2006

Bachelor's degree in Post-BSc: Internship and Research
Max Planck Institute of Colloids and Interfaces – Berlin, Germany, October 2002 to March 2004

BSc in Electronics and Computer Science
Jahangirnagar University – Dhaka, January 1996 to August 2001

Employment History:

Place of work	Country	Position	Duties	Start-End
St. Mary's College of Maryland	USA	Visiting Assistant Prof	Teaching of BSc level students, Development of course curriculum, and Research.	July 31, 2024 - present
University of Agder	Norway	Research Fellow	Research and development of the state-of-art Computer Vision and Deep Learning methods for detecting and tracking crowd abnormal behaviors in surveillance videos.	September 15, 2021 March 31, 2024
University of Hail	Saudi Arabia	Associate Prof (Research)	Research and Development of Deep Learning Algorithms, Teaching of BSc level students, and Development of BSc level curriculum.	November 19, 2018 August 31, 2021
International Balkan University	North Macedonia	Associate Prof (Research)	Research and Development of Machine Learning algorithms, Development of BSc level curriculum, Teaching of BSc and MSc level students, as well as Supervision of students' theses.	October 04, 2017 September 30, 2018

International University of Sarajevo	**Bosnia & Herzegovina**	Assistant Prof (Research)	Research and Development of Machine Learning algorithms, Teaching of BSc and MSc level students, as well as Supervision of students' theses.	April 25, 2016 June 30, 2017
Gediz University	**Türkiye**	Assistant Prof (Research)	Research and Development of Machine Learning algorithms, Development of BSc level and MSc level curricula, Teaching of BSc and MSc level students, as well as Supervision of students' theses.	January 08, 2011 January 31, 2016

Postdoctoral Research Fellow (Deep Learning on Smart City Applications)
University of Agder – Grimstad : September 2021 to March 2024

AI4CITIZENS Project: Research and development of the state-of-art Computer Vision and Deep Learning methods for detecting and tracking crowd abnormal behaviors in surveillance videos.

Tools used: Python, Sklearn, Pandas, Numpy, Pytorch/TF, Google Colab, Jupyter Notebook, R, GitHub, Jira for PM, MATLAB/Simulink, statistical software applications with Windows.

Research Associate Prof (Senior Computer Scientist: Deep Learning)
University of Hail - Ha'il: November 2018 to August 2021

Responsibilities: Research & Development of Machine Learning and Deep Learning Algorithms (e.g., *Classification of Breast Cancer Histopathological Images using Deep Learning, etc.*). Also teaching some BSc in Computer Science and Engineering courses.

Tools used: Python, Sklearn, Pandas, Numpy, Pytorch/TF, R, GitHub, Tableau, MATLAB/Simulink, statistical software applications with Windows. Blackboard was used for distance learning and meetings.

Research Associate Prof (Senior Computer Scientist:Machine Learning)
International Balkan University – Skopje : October 2017 to September 2018

Responsibilities: Research & Development of Machine Learning Algorithms. Also teaching few BSc and MSc level courses.

Tools used: OpenCV, C/C++, MySQL, MATLAB/Simulink, statistical software applications with Windows based OS.

Research Assistant Prof (Computer Scientist : Machine Learning)
International University of Sarajevo (IUS) – Sarajevo : April 2016 to June 2017

Responsibilities: Research & Development of Machine Learning Algorithms. Also teaching few BSc and MSc level courses.

Tools used: OpenCV, C/C++, MySQL, MATLAB/Simulink, statistical software applications with Windows based OS.

Research Assistant Prof (Computer Scientist : Machine Learning)
Bakırçay (Gediz) University – İzmir :January 2011 to January 2016

Responsibilities: Responsibilities: Research & Development of Machine Learning Algorithms. Also teaching few BSc and MSc in Computer Science and Engineering courses.

Tools used: OpenCV, C/C++, SQL, FORTRAN, Perl, Assembly, MATLAB/Simulink, Jira for PM, statistical software applications with Windows based OS

Technical Skills:

Skills	Level of Expertise	Years of Experience	Last Use
• MATLAB/Simulink	Expert	10+ years	2024
• Python (10+ years)	Expert	10+ years	2024
• Data Structures (10+ years)	Expert	10+ years	2024
• Image Processing (10+ years)	Expert	10+ years	2024
• Computer Vision (10+ years)	Expert	10+ years	2024
• Linux (4+ years)	Mid-Level	4+ years	2020
• C/C++ (9+ years)	Expert	9+ years	2019
• AI (10+ years)	Expert	10+ years	2024
• Deep learning (6 years)	Expert	6 years	2024
• SQL (2 years)	Mid-Level	2 years	2024
• GitHub (2 years)	Expert	2 years	2024
• Data Science (5 years)	Expert	5 years	2024
• Software Development (10+ years)	Expert	10+ years	2024
• Machine Learning (10+ years)	Expert	10+ years	2024
• MySQL (2 years)	Mid-Level	2 years	2024
• Computer Science (10+ years)	Expert	10+ years	2024
• FORTRAN (8+ years)	Expert	8+ years	2023
• R (2 years)	Expert	2 years	2024
• Agile (3+ years)	Expert	2 years	2024
• Tableau (5 years)	Expert	5 years	2024
• Research & Development (10+ years)	Expert	10+ years	2024
• Microsoft Visual Studio (5 years)	Expert	5 years	2024
• Jira (5 years)	Expert	5 years	2024
• LaTeX (20+ years)	Expert	20+ years	2024
• Assembly (10+ years)	Expert	10+ years	2023
• MPI (4 years)	Expert	4 years	2023

• OpenMPI (1 year)	Mid-Level	1 years	2023			
• Perl (8+ years)	Expert	8+ years	2019			
• VTK (1 year)	Mid-Level	1 years	2024			
• Snowflake (1 year)	Mid-Level	1 years	2024			

Courses Taught:

Academic Year	Semester	Course Code (Name)	Venue	Credit Hours (Theory)	Credit Hours (Lab)	Number of Students
2010-2011	Spring	COM 202 (Algorithms)	Gediz University	3	0	01
2010-2011	Spring	COM 252 (Computer Organization)	Gediz University	3	0	01
2010-2011	Spring	BIL 108 (Discrete Mathematics)	Gediz University	3	0	01
2011-2012	Fall	COM 101 (Introduction to Programming)	Gediz University	3	2	36
2011-2012	Fall	COM 111 (Introduction to Computer Engineering)	Gediz University	2	0	36
2011-2012	Fall	COM 341 (Operating Systems)	Gediz University	3	2	02
2011-2012	Spring	COM 104 (Discrete Mathematics)	Gediz University	3	0	38
2011-2012	Spring	COM 202 (Algorithms)	Gediz University	3	0	14
2011-2012	Spring	COM 352 (Database Management Systems)	Gediz University	3	2	02
2012-2013	Fall	COM 101 (Introduction to Programming)	Gediz University	3	2	46
2012-2013	Fall	COM 111 (Introduction to Computer Engineering)	Gediz University	2	0	51
2012-2013	Fall	EEE 221 (Fund. of Electric and Electronic Circuits)	Gediz University	3	2	46
2012-2013	Spring	COM 104	Gediz	3	0	47

		(Discrete Mathematics)	University			
2012-2013	Spring	COM 202 (Algorithms)	Gediz University	3	0	36
2012-2013	Spring	COM 430 (Computer Architecture)	Gediz University	3	2	09
2013-2014	Fall	COM 201 (Data Structures)	Gediz University	3	2	48
2013-2014	Fall	COM 341 (Operating Systems)	Gediz University	3	2	35
2013-2014	Fall	COM 497 (Senior Design Project I)	Gediz University	3	3	06
2013-2014	Spring	COM 104 (Discrete Mathematics)	Gediz University	3	0	39
2013-2014	Spring	COM 202 (Algorithms)	Gediz University	3	0	42
2013-2014	Spring	COM 480 (Computer Vision)	Gediz University	3	0	24
2013-2014	Spring	COM 498 (Senior Design Project II)	Gediz University	3	3	06
2014-2015	Fall	COM 201 (Data Structures)	Gediz University	3	2	33
2014-2015	Fall	COM 341 (Operating Systems)	Gediz University	3	2	39
2014-2015	Fall	COM 497 (Senior Design Project I)	Gediz University	3	3	02
2014-2015	Spring	COM 104 (Discrete Mathematics)	Gediz University	3	0	46
2014-2015	Spring	COM 202 (Algorithms)	Gediz University	3	0	36
2014-2015	Spring	COM 445 (Multi-core Computing)	Gediz University	3	0	29
2014-2015	Spring	COM 498 (Senior Design Project II)	Gediz University	3	3	06
2014-2015	Spring	COM 562 (Multi-core and Parallel Computing)	Gediz University	3	0	06

2015-2016	Fall	COM 221 (F. of Elec. and Electronic Circuits)	Gediz University	3	0	53
2015-2016	Fall	COM 341 (Operating Systems)	Gediz University	3	2	30
2015-2016	Fall	COM 497 (Senior Design Project I)	Gediz University	3	3	04
2015-2016	Fall	COM 537 (Machine Learning)	Gediz University	3	0	08
2015-2016	Spring	CS 103 (Introduction to Programming)	International University of Sarajevo	3	2	25
2015-2016	Spring	CS 306 (Database Management)	International University of Sarajevo	3	2	13
2016-2017	Fall	CS 307 (Operating Systems)	International University of Sarajevo	3	2	25
2016-2017	Fall	CS 423 (Parallel Computing)	International University of Sarajevo	3	0	18
2016-2017	Fall	CS 618 (Advanced Topic in Parallel Computing)	International University of Sarajevo	3	0	03
2016-2017	Spring	CS 103/201 (Introduction to Programming)	International University of Sarajevo	3	2	38
2016-2017	Spring	MATH 209 (Discrete Math II)	International University of Sarajevo	3	2	10
2016-2017	Spring	CS 304 (Computer Architecture)	International University of Sarajevo	3	2	41
2016-2017	Spring	CS 601 (Advanced Computer Vision)	International University of Sarajevo	3	0	07
2017-2018	Fall	CE 201	International	3	0	40

		(Python Programming)	Balkan University			
2017-2018	Fall	CE 414 (Visual Programming)	International Balkan University	3	0	20
2017-2018	Fall	590 RMAW (Research Method & Academic Writing)	International Balkan University	2	0	04
2017-2018	Spring	CS 413 (Human Computer Interfaces)	International Balkan University	3	0	19
2017-2018	Spring	CE 307 (Computer Graphics)	International Balkan University	3	0	17
2017-2018	Spring	EE416 (Introduction to Robotics)	International Balkan University	2	0	14
2018-2019	Fall	COE 360 (Principles of VLSI Design)	University of Hail	3	0	31
2018-2019	Fall	COE 405 (VHDL Design & Modelling of Digital Sys)	University of Hail	3	0	22
2018-2019	Fall	COE 446 (Mobile Computing)	University of Hail	3	0	32
2018-2019	Spring	COE 305 (Microcomputer Systems)	University of Hail	3	1	21
2018-2019	Spring	COE 405 (Computer Architecture)	University of Hail	3	0	22
2018-2019	Spring	COE 420 (Parallel Computing)	University of Hail	3	0	03
2019-2020	Fall	COE 360 (Principles of VLSI Design)	University of Hail	3	0	31
2019-2020	Fall	COE 405 (VHDL Design & Modelling of Digital Sys)	University of Hail	3	0	22
2019-2020	Fall	COE 446	University of	3	0	32

		(Mobile Computing)	Hail			
2019-2020	Spring	COE 305 (Microcomputer Systems)	University of Hail	3	1	17
2019-2020	Spring	COE 400 (System Design Lab)	University of Hail	2	2	16
2020-2021	Fall	COE 305 (Microcomputer Systems)	University of Hail	3	1	41
2020-2021	Fall	COE 360 (Principles of VLSI Design)	University of Hail	3	0	16
2020-2021	Spring	COE 305 (Microcomputer Systems)	University of Hail	3	1	27
2020-2021	Spring	COE 308 (Computer Architecture)	University of Hail	3	1	42
2020-2021	Spring	COE 360 (Principles of VLSI Design)	University of Hail	3	0	23
2024-2025	Fall	COSC 201 (Algorithms and Data Structures)	St. Mary's College of Maryland	3	-	20
2024-2025	Fall	COSC 420 (Distributed and Parallel Computing)	St. Mary's College of Maryland	3	-	5

Completed Scientific Projects:

Project 5 (Sep-2021 to Mar-2024): **AI4CITIZENS** (Responsible AI for Citizen Safety in Future Smart Cities). I had been involving on WP2 for more than 2-years. WP2 : Anonymous Crowd Monitoring for Event Detection (ACMED), which is being led and managed by UiA and supported by the Research Council of Norway.

My Contributions to the WP2 of AI4CITIZENS:
1. Necessary video data collection for WP2 and authorization by the Sikt.
2. Conduct a detailed survey of Deep Crowd Anomaly Detection: State-of-the-Art, Challenges, and Future Research Directions.
3. Propose a new Taxonomy of deep crowd anomaly detection models based on the existing state-of-the-art models.
4. Implementation and performance testing on unsupervised crowd event detection (with appropriate anomaly scoring) and supervised event classification.
5. Investigation of generative adversarial networks for generating synthetic data for anomaly detection and event classification.

6. Propose a novel generalized framework (rpNet) for proposing a series of deep models by fusing several options of a reconstruction network (rNet) and a prediction network (pNet) to detect anomaly in videos efficiently.
7. Propose a multiple instance learning (MIL)-based generalized architecture named CNN-ViT-TSAN, by using CNN and/or vision transformer (ViT) extracted features and temporal self-attention network (TSAN) to specify a series of models for the weakly supervised video anomaly event detection problem.
8. Study regulations and ethical considerations surrounding government use of the most advanced Deep learning technologies. For example, a facial recognition algorithm could be trained to recognize a white person more easily than a black person because this type of data has been used in training more frequently. This can negatively affect people from minority groups, as discrimination hinders equal opportunity and perpetuates oppression.

My used Knowledge/Tools for Project 5: Solid background with Computer Science & Engineering, Probability Theory & Statistics, Python, Sklearn, Pandas, Numpy, Pytorch/TF, R, GitHub, MATLAB/Simulink, Jira for PM, Tableau, statistical software applications with Windows.

Project 4 (Oct-2013 to Apr-2016): MAG113M222 (Analysis of Pedestrian-Vehicle Conflicts Caused by Design and Implementation of Pedestrian Facilities).
My Contributions to the Project 4: I was involved to design and implement algorithms related to: The extent of the influence of environment conditions on pedestrian movement, the potential contribution to pedestrian safety by improvements in pedestrian transportation facilities, and suggestions on design criteria toward regulations with traffic for parking buildings.In brief, I gained experience in developing AI solutions for public transportation sector. Besides, I had to create collaboration with German SICK AG Company for data collection, data management standards, policies, and best practices from 01/2013 to 11/2017.

Tools used for Project 4: Solid background with Computer Science & Engineering, Probability Theory & Statistics, OpenCV, MATLAB/Simulink, C/C++, SQL, Jira for PM, Agile, Tableau, statistical software applications with Windows.

Project 3 (Sep-2007 to Jul-2010): MIAUCE (Multimodal Interactions Analysis and exploration of Users within a Controlled Environment) project (2006-2009). My PhD study was a part of MIAUCE, which is the 6th framework research programme of European Union (IST-2005-5-033715).

My Contributions to the Project 3: It includes my PhD Thesis:
I also studied regulations and ethical considerations surrounding government use of machine learning technologies. A major challenge of the MIAUCE project was to integrate human values (e.g., legal social and ethical aspects) as central design criterion along with more classical or traditional criteria of usability, economy, reliability, and correctness. The legal and ethical issues that confront society due to AI technologies include privacy and surveillance, bias or discrimination, and potentially the philosophical challenge is the role of human judgment.

Tools used for Project 3: Solid background with Computer Science & Engineering, Probability Theory & Statistics, MATLAB/Simulink, Visual Studio, C/C++, OpenCV, FORTRAN, SQL with Windows.

Project 2: Code Optimization.I completed a pre-MSc project from 10/2002 to 03/2006 related to the optimization of fundamental math functions for molecular dynamic simulation supported by the Max Planck Society (at Theory Department of MPIKG: Max Planck Institute of Colloids and Interfaces), Germany. An extension of this work was continued from 2011 to 2014.

Some hints of mytasks for computing 1/sqrt(x): I had issued one add and one multiply each cycle, and the result had been available 4 cycles later for add as well as multiply to obtain optimum performance in pipelines. In order to avoid too much human work in loop unrolling and software pipelining I had used the code duplication and the code generation respectively. The code duplication and the code generation made the loop unrolling and the software pipelining automatic. I had used argument reduction (approximation) to minimize the additional cost for rounding. The optimized routine expects some smarter compilers like gcc, cc, f95, efc, and whatnot for high performance. My routine was highly optimized inmanually; hence compiler optimization options (e.g., f95) did not take a vital role in performance. My optimized routine for computing 1/sqrt(x) was significantly faster than using standard library routine or hardware division or both, provided that the vector length n should be large enough. My routine was much more efficient on the Alpha 21264 and 21364. My optimized code with or without some maintainance might be compiled and would execute correctly on any processor, which conformed to the out-of-order scheduling as well as the IEEE 754 floating point standard. For 32-vector length in Alpha 21364, using the sophisticated compiler optimized options my manually optimized code brought the speedup up to 8.32, 5.29, and 3.46 for gcc, cc, and f95, respectively. Fortran language is appropriate for numerical computations but C language is good for system programming. Fortran consents to static storage allocation which saves the time spent on creating and destroying activation records on the stack every procedure call/return. The C standard requires only a basic double-precision mathematical library whereas Fortran standard requires single and double precision mathematical library. Single-precision calculations are faster than double-precision calculation as single precision data is smaller and so memory cache misses are considerably less. If we have only double-precision mathematical routines to calculate single-precision the introductory mathematical primitives will sop up dispensable processor time.

Summary of my Contributions to Project 2: Mydeveloped math functions were highly optimized manually. Hence compiler optimization options would not have a big effect on performance. The reducedspeed-up obtained with *efc* compiler is due to the highly optimized FORTRAN built-in functions.My manually optimized HPC functions can be called from FORTRAN and/or C/C++ environments (Project link).

My used Knowledge/Tools for Project 2: Solid background with Computer Science & Engineering, Advanced Computer Architecture, Alpha 21264 & 21364, IA-64, AMD Opteron, MATLAB/Simulink, C/C++, FORTRAN, Perl, Assembly, Vectorization, Loop-unrolling, Software Optimization, Various Compiler Options with UNIX.

Project 1 (Jan-2001 to Jun-2001): Path Length Simulation.I completed a pre-BSc project in 2001 entitled: "Computer Simulation of the Path Lengths of Secondary Charged Particles in a 3D Radiator".

My Contributions to Project 1: The random process of Thermal Neutron interaction with a LiF converter or radiator was simulated. The converter was modeled as a 3D object of thickness 45 micrometers and target surface area 1 cm^2 . Upon interaction in the radiator, Triton & Alpha particles were produced. So, we obtained numerical estimates of the path lengths of the produced 2nd particles in all directions inside of the LiF.

My used Knowledge/Tools for Project 1: Solid background of Computer Science and some knowledge of Radiological Physics, C/C++ with Windows.

Other work experience:

Postdoctoral Research Fellow (Deep Learning on Smart City Applications)
University of Agder – Grimstad : September 2021 to March 2024

AI4CITIZENS Project: Research and development of the state-of-art Computer Vision and Deep Learning methods for detecting and tracking crowd abnormal behaviors in surveillance videos.

Tools used: Python, Sklearn, Pandas, Numpy, Pytorch/TF, Google Colab, Jupyter Notebook, R, GitHub, Jira for PM, MATLAB/Simulink, statistical software applications with Windows.

Research Associate Prof (Senior Computer Scientist: Deep Learning)
University of Hail - Ha'il: November 2018 to August 2021

Responsibilities: Research & Development of Machine Learning and Deep Learning Algorithms (e.g., *Classification of Breast Cancer Histopathological Images using Deep Learning, etc.*). Also teaching some BSc in Computer Science and Engineering courses.

Tools used: Python, Sklearn, Pandas, Numpy, Pytorch/TF, R, GitHub, Tableau, MATLAB/Simulink, statistical software applications with Windows. Blackboard was used for distance learning and meetings.

Research Associate Prof (Senior Computer Scientist:Machine Learning)
International Balkan University – Skopje : October 2017 to September 2018

Responsibilities: Research & Development of Machine Learning Algorithms. Also teaching few BSc and MSc level courses.

Tools used: OpenCV, C/C++, MySQL, MATLAB/Simulink, statistical software applications with Windows based OS.

Research Assistant Prof (Computer Scientist : Machine Learning)
International University of Sarajevo (IUS) – Sarajevo : April 2016 to June 2017

Responsibilities: Research & Development of Machine Learning Algorithms. Also teaching few BSc and MSc level courses.

Tools used: OpenCV, C/C++, MySQL, MATLAB/Simulink, statistical software applications with Windows based OS.

Research Assistant Prof (Computer Scientist : Machine Learning)
Bakırçay (Gediz) University – İzmir :January 2011 to January 2016

Responsibilities: Responsibilities: Research & Development of Machine Learning Algorithms. Also teaching few BSc and MSc in Computer Science and Engineering courses.

Tools used: OpenCV, C/C++, SQL, FORTRAN, Perl, Assembly, MATLAB/Simulink, Jira for PM, statistical software applications with Windows based OS.

Languages:
• English - Fluent
• Bengali - Fluent
• Turkish - Expert
• German – Beginner

Research Sample Links:

- ✓ https://scholar.google.com/citations?user=9dQQUGAAAAAJ
- ✓ https://www.youtube.com/watch?v=4GVMhUiXrFM
- ✓ https://www.youtube.com/watch?v=7qf6jHtK8jo
- ✓ https://www.youtube.com/watch?v=8C46CJlcJvA
- ✓ https://www.youtube.com/watch?v=Kdx1OtShcSQ
- ✓ https://www.youtube.com/watch?v=Or-pDkj0q2A
- ✓ https://www.youtube.com/watch?v=QYRF7pPGFr0

Best Paper Award:

Our paper entitled "***Sentiment Analysis of Turkish Twitter Data using Polarity Lexicon and Artificial Intelligence***" became the best scientific paper at the event of the *International Conference on Emerging Technologies in Computing 2020*

Groups - **IEEE Member (Present)**

Selected Publications:

March/April 2024 : **Deep Crowd Anomaly Detection: State-of-the-Art, Challenges, and Future Research Directions**[It was a contribution of the AI4CITIZENS project. It has been under review since 29 Feb.]https://arxiv.org/pdf/2210.13927.pdf

September 2023 : **CNN-ViT Supported Weakly-Supervised Video Segment Level Anomaly Detection** [It was a contribution of the AI4CITIZENS project.]https://www.mdpi.com/1424-8220/23/18/7734

March 2023 : **Deep Crowd Anomaly Detection by Fusing Reconstruction and Prediction Networks** [It was a contribution of the AI4CITIZENS project.]https://www.mdpi.com/2079-9292/12/7/1517

October 2022 : **Classification of Breast Cancer Histopathological Images Using DenseNet and Transfer Learning**[It was a contribution of other project.]https://www.hindawi.com/journals/cin/2022/8904768/

June 2021 : Laser-Based Algorithms Meeting Privacy in Surveillance: A Survey[It was a contribution of the extended MAG113M222 project.]https://ieeexplore.ieee.org/abstract/document/9465148

June 2014 : High-performance mathematical functions for single-core architectures[It was a contribution of the extended Code-Optimization project.]https://www.worldscientific.com/doi/abs/10.1142/S0218126614500510

June 2008 : High-performance computing of $1/x_i$ and $\exp(\pm x_i)$ for a vector of inputs x_i on Alpha and IA-64 CPUs[It was a contribution of the Code-Optimization project.]https://www.sciencedirect.com/science/article/abs/pii/S1383762107001294