

COMPUTER SCIENCE Department

NEWSLETTER

FALL

2024



COMSATS

UNIVERSITY ISLAMABAD
LAHORE CAMPUS



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DR. ASAD HUSSAIN

MESSAGE FROM
DIRECTOR

Assalam-u-Alaikum!

“ I welcome you all on the behalf of the Department of Computer Science . In comparison to other disciplines, our students are getting more skillful in modern technology. We see our students as excellent programmers, researchers and analysts in the future. We are well aware of everyday breakthroughs in modern technology and thus are committed to equip them with advanced competencies to manage the growing needs of sciences and technologies. Our highly qualified faculty members ensure that you have a solid technical grasp on different subjects to apply this.”



MESSAGE FROM HOD



DR. FAROOQ AHMAD

Assalam-u-Alaikum! During the Fall 2024 semester, we have achieved several milestones that reflect our dedication, as highlighted in this newsletter. Our faculty members are engaged in cutting-edge research, our students are excelling in their academic and extracurricular pursuits, and our collaborative projects are making a tangible impact in computing.

As we progress through this semester, I am reminded of our department's unwavering commitment to excellence in computing education. Our vision is to be the leading computing department, dedicated to promoting excellence in teaching and preparing our graduates to become technically competent professionals. We aim to equip our students with the skills and knowledge necessary to make significant contributions to the knowledge economy and the scientific development of our country.

We are proud to see our graduates stepping into pivotal roles in the industry, embodying the technical prowess and innovative spirit that our department strives to introduce. Their successes are a testament to the quality of education and rigorous training they receive here.

Looking ahead, we remain committed to fostering an environment that encourages innovation, critical thinking, and continuous learning. We will continue to enhance our curriculum, expand our research initiatives, and strengthen our industry partnerships to ensure that our students are well-prepared to meet the challenges of the ever-evolving tech landscape.

Thank you for your dedication and hard work. Together, we will continue to advance the frontiers of computing and contribute to the scientific and economic growth of our nation.

Events

Orientation

Comprehensive orientation sessions were arranged for the newly admitted students in BS(CS) and BS(SE) programs in the computer science department for the Fall 2024 semester on September 2nd, 2024. The event was held in the N Block, at COMSATS University Islamabad, Lahore Campus. Esteemed faculty members including worthy Director and all Heads of Academic Departments, and relevant officials from the administration graced the occasion to welcome the new students.

The students were given a detailed presentation by senior faculty members of the CS department on rules, regulations, and campus environment and facilities. Senior faculty along with the batch advisor welcomed the new students and provided valuable advice, encouraging them to put in their best efforts to excel in their studies. Orientation day provided an opportunity to enlighten the students about the university rules and regulations and other related matters.

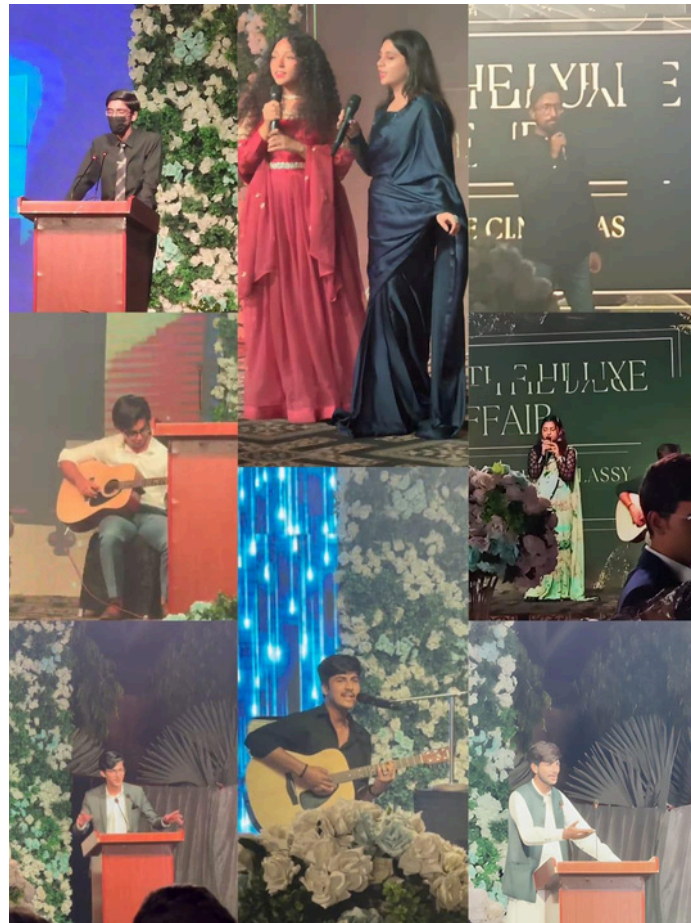
After the presentation, the concerned batch advisors interacted with the students and parents and took them on-campus tour to familiarize students with various academic and administrative blocks and other campus facilities.



Events

Welcome Event

The welcome event was organized by Department of Computer Science students of SP24 BCS and BSE for the students of FA24 BCS and BSE on 4th October, 2024 at COMSATS University Islamabad, Lahore Campus.



TechnoVerse Student Fest

The ACM chapter at CUI Lahore recently hosted the TechnoVerse Student Fest, a flagship festival at COMSATS University, Lahore. It was held from October 8 to October 10, 2024. This three day event always aims to foster innovation, creativity and collaboration among students passionate about technology, gaming, and design.

TechnoVerse 1.0, which featured foundational competitions like Coding Spree, Web-e-thon, and Treasure Hunt is an exclusive event for the students of COMSATS. Building on the success of the first edition, TechnoVerse 2.0 expanded to welcome students from multiple universities, introducing a broader range of competitions to test diverse skills like Coding Spree, Web-e-thon, and Treasure Hunt, Notion Template Design, Poster Design, FIFA Competition and Tekken Competition. Supported by key sponsors, this edition also featured an Industry Panel Talk, offering students insights and networking opportunities with professionals in the field. On the last day, a celebratory event was organized to acknowledge the hard work and dedication of all the participants and organizers who put in a lot of efforts to make this event memorable for all.





Convocation 2024

COMSATS University Islamabad, Lahore Campus held its Convocation Ceremony on the 27th of November 2024. The event was impeccably organized and ran smoothly on schedule. Director Campus, Head of Department, all the faculty, administration staff and graduating students from all the departments participated with great interest.

Chief Guest, Rector COMSATS University Islamabad, Prof. Dr Sajid Qamar and his team joined online from Islamabad campus. Director CUI Lahore Campus, Dr. Syed Asad Hussain presided over the session. Alongside Director, Head of Department, Dr. Farooq Ahmad distributed the degrees among the graduating students of Computer Science and Software Engineering. On this day, a total of 216 students from the Computer Science department were conferred their degrees. Medals were awarded to students who demonstrated exceptional performance throughout their degree program.

Events

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RASWARS 3.0

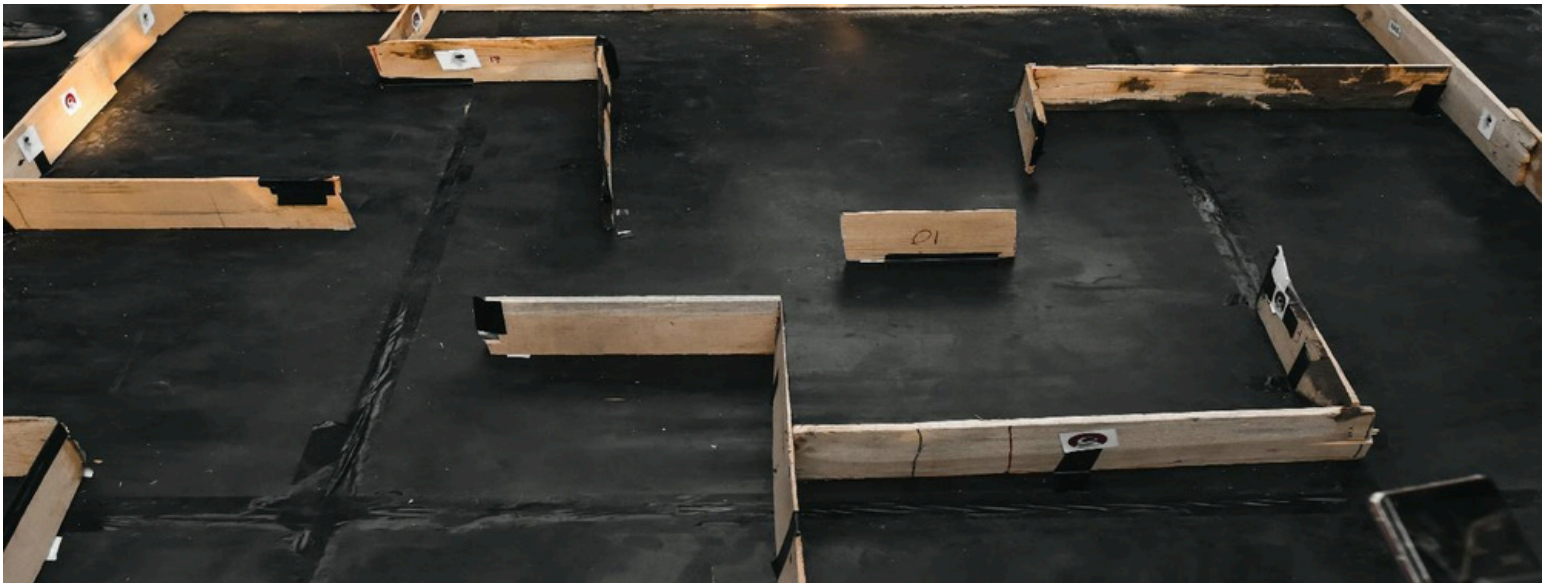
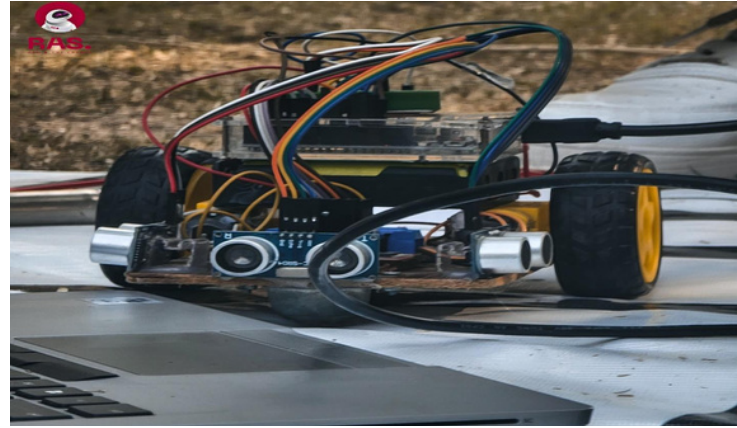
The Robotics and Automation Society (RAS) at COMSATS Lahore hosted RASWARS 3.0, its flagship robotics competition with a record breaking 150+ participants, 46 innovative robots, and attendees representing external institutions such as UET, GCU, BNU, and UMT, the event was a massive success.

The SumoStrike module electrified the audience with thrilling robot face-offs in a classic sumo-style competition. A total of 6 bots entered the arena, each designed with powerful motors and innovative mechanisms to outwit and overpower their opponents. Precision and programming were at the forefront in the Line Following module, where 15 bots competed to navigate a complex track filled with sharp turns, obstacles, and unexpected twists. Utilizing advanced sensors and algorithms, participants demonstrated their technical prowess. The Obstacle Avoidance module tested the ingenuity and adaptability of 11 bots as they navigated a challenging course filled with hurdles. Each robot showcased its ability to detect and avoid collisions while reaching its destination. More than 14 bots brought speed, control, and thrill to the track as they competed to complete laps in record time. The roaring crowd and nail-biting finishes made this module the ultimate crowd-pleaser.

The stalls at RASWARS 3.0 were an essential highlight of the event, attracting over 2000 attendees who experienced a vibrant mix of entrepreneurship, technology, and campus culture. The event culminated in a grand closing ceremony filled with excitement and celebration. Winners of each module were honored with certificates and cash prizes, with the grand prize of PKR 20,000 awarded to the champions who showcased outstanding talent and dedication. Distinguished guests, including Dr. Farooq Ahmed, Head of the Department, along with faculty advisors Dr. Wajahat Qazi and Ms. Asmara, graced the occasion. They presented the awards and delivered inspiring speeches that encouraged all participants to continue pushing the boundaries of robotics and innovation.

Events

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Annual Dinner 2024

The Department of Computer Science, COMSATS University Islamabad, Lahore Campus hosted an unforgettable Annual Dinner on 6th December 2024, with a host of esteemed guests and industry leaders joining the celebration. We were honored to welcome Prof. Dr. Syed Asad Hussain, Director CUI Lahore Campus, and Dr. Farooq Ahmad, Head of the CS Department. Our distinguished Chief Guests, Mr. Azeem Akram, Co-Founder & CEO of Alpha Squad Technologies, and Mr. Qasim Agha, Founder & CEO of Technolangs Solutions, shared their valuable insights with attendees, making the evening even more special.

The event was filled with inspiring speeches, delicious food, and fun activities. Director CUI, Prof. Dr. Syed Asad Hussain and HoD Dr. Farooq Ahmad opened the evening with motivational speeches, reflecting on the department's accomplishments and encouraging students to aim for excellence. The formal dinner provided a chance for students and faculty to connect and enjoy great food in a warm atmosphere.

One of the evening's highlights was the bonfire, where attendees gathered to share stories and capture memories in cozy moments. The casual talks with the Chief Guests allowed aspiring entrepreneurs to gain valuable advice on building successful startups.

The sky lantern release was a breathtaking spectacle, symbolizing hope and collective aspirations. The sight of glowing lanterns floating into the night sky was both serene and inspiring. The CS Department Annual Dinner 2024 was truly a night to remember, filled with unforgettable moments and lasting memories.



Alumni Dinner 2024

Industry Liaison Committee organized an event on Friday December 13th 2024, where the alumni of the COMSATS Computer Science gathered for a meet up. The event focused on the election of various bodies including executive body, alumni body and the general posts of president, vice president, general and finance secretary.

The event started with the recitation of Holy Quran, then Dr Frukhs Zeeshan - Convener of the committee addressed a welcome note. Prof. Dr. Syed Asad Hussain, Director Lahore campus, then addressed the alumni and showed a great interest in the event. The elected candidates and committee members also talked with all the alumni with great enthusiasm. They were later presented with shields and certificates. The success stories of alumni were also recorded as interviews.

The event concluded with a bonfire and dinner which was enjoyed by all the participants. It was a very successful event for the Computer Science department.



Events

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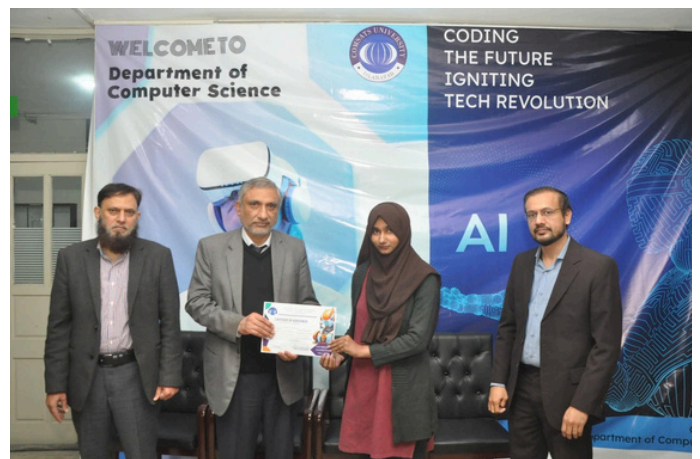


Final Year Project Exhibition Fall 2024

The Department of Computer Science showcased its Final Year Project Exhibition on Thursday 16th January 2025. There were 16 teams of evaluators who thoroughly evaluated the students' work. Each team consisted of three team members. Two internal members from the faculty of Computer Science and one external member either from industry or academia. Over the course of their final year, these students work on transforming their innovative ideas into practical solutions that address various community challenges. They present their projects through presentations and live demos of their web or mobile app solutions, and also create posters to showcase their work. A poster competition is held alongside the event to encourage students to develop additional skills, such as design, communication, and public speaking.

There were a total of 65 groups who presented their work from BS Computer Science and BS Software Engineering. After successful completion of the evaluation process, top 3 teams from each CS and SE program were selected as position holders.

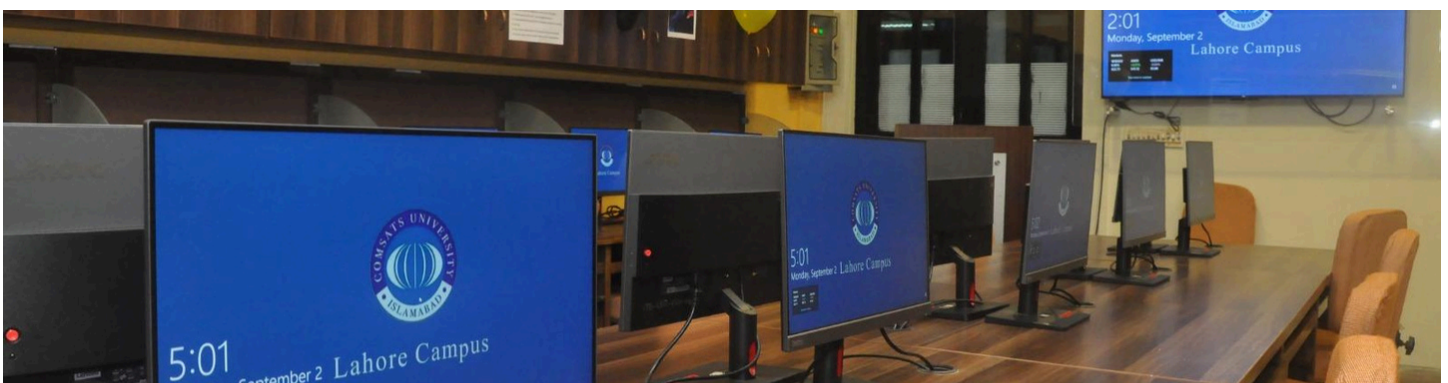
FYP Evaluation day was concluded with a prize distribution ceremony where Chief Guest Director CUI, Lahore Campus Dr. Syed Asad Hussain and HoD Computer Science Department Dr. Farooq Ahmad graced the event. The ceremony kicked off with inspiring words from Dr. Syed Asad Hussain, who congratulated all the students for successfully completing their Final Year Projects (FYPs) and their degree programs. This was a moment of recognition for their hard work and dedication throughout their academic journey. Following the speeches, the guests presented certificates to the winning teams, acknowledging their outstanding contributions. Additionally, certificates were given to the supervisors of the winning projects, recognizing their support and guidance in helping their students achieve success. It was a wonderful way to honor both the students and their mentors.



News

Inauguration of Artificial Intelligence Lab

Artificial Intelligence Lab (AI Lab) was inaugurated by Director COMSATS University Islamabad, Lahore Campus Prof. Dr. Syed Asad Hussain along with Dr. Farooq Ahmad Head Department of Computer Science, on 2nd September, 2024. This new facility is a significant milestone for the department. The inauguration ceremony was attended by faculty and students. The lab is equipped with the latest technology and aims to enhance digital literacy and provide students with the skills needed to succeed in today's tech-driven world.



2nd Prize at 2nd International AI Championship 2024

Department of Computer Science, COMSATS Islamabad, Lahore Campus, has demonstrated its leadership in Artificial Intelligence by securing the 2nd position at the prestigious 2nd International AI Championship 2024, organized by the Artificial Intelligence Education Foundation (AIEF) and Soliton Technologies on 25th November, 2024. The competition saw over 200 innovative AI projects from global participants from various known universities.

Team 15, Archentra, secured 2nd prize of PKR 200,000 for their cutting-edge AI-driven platform built for streamlining the architectural design process. The project was supervised by Dr. Muhammad Aksam Iftikhar. Archentra's solution leverages AI to optimize design processes, improve real estate planning, and streamline 3D model workflows, addressing key challenges such as project timelines, resource management and cost efficiency in these critical sectors.

The competition was honored by the presence of distinguished guests, including Dr. Fan Zhang, Professor at Zhejiang University, who served as the Chief Guest. In his keynote address, Dr. Zhang praised the exceptional technical expertise and creativity displayed by the participants, highlighting the importance of such events in fostering global AI collaboration. His words underscored the growing prominence of Pakistan in the global AI landscape. The remarkable achievement highlights the exceptional creativity, technical expertise, and industry relevance of COMSATS' AI talent.



PhD Graduates Fall 2024

Ms. Rimsha Anam (Registration No. CIIT/FA17-PCS-002/LHR) has successfully defended her doctoral thesis. The title of her thesis is “Multilingual Named Entity Recognition for Low Resource Languages”. Ms. Rimsha Anam started her PhD under the supervision of Prof. Dr. M. Waqas Anwar.

Mr. Yasar Mehmood (Registration No. CIIT/FA19-PCS-001/LHR) has successfully defended his doctoral thesis. The title of his thesis is “A Framework for the Diagnosis and Prognosis of Brain Tumor Using Deep Learning”. Mr. Yasar Mehmood started his PhD under the supervision of Dr. Usama Ijaz Bajwa.

Mr. Arif Husen (Registration No. CIIT/SP19-PCS-006/LHR) has successfully defended his doctoral thesis. The title of his thesis is “Intelligent Resource Detection, Decision and Optimization for 6G and Beyond networks”. Mr. Arif Husen started his PhD under the supervision of Dr. M. Hasanain Ch

Ms. Romila Aziz (Registration No. CIIT/FA18-PCS-003/LHR) has successfully defended her doctoral thesis. The title of her thesis is “A Hybrid Cascade Model for Non Word and Real Word Error Detection and Correction in Highly Inflectional Urdu Language Using Linguistic Knowledge”. Ms. Romila Aziz started her PhD under the supervision of Prof. Dr. M. Waqas Anwar.

Following are the publications from the faculty of computer science

- Faizan Ahmad, Zeeshan Ahmed, Iqra Obaid, Momina Shaheen, Hameedur Rahman, Gurjinder Singh & Muhammad Junaid Anjum, "Motivation, Engagement, and Performance in Two Distinct Modes of Brain Games: A Mixed Methods Study in Children", International Journal of Human-Computer Interaction, pp: 1-15, DOI: <https://doi.org/10.1080/10447318.2024.2426915>, Impact Factor: 3.4
- IQRA OBAID, "TechMark: a framework for the development, engagement, and motivation of software teams in IT organizations based on gamification", PeerJ Computer Science
- Amna Altaf, Muhammad Waqas Anwar, Muhammad Hasan Jamal, Usama Ijaz Bajwa, and Sadaf Rani, "Aspect-based sentiment analysis in Urdu language: resource creation and evaluation", Neural Computing and Applications, DOI: <https://doi.org/10.1007/s00521-024-10145-x>, Impact Factor: 4.5
- Tahir Maqsood, Sardar Khaliq uz Zaman, Arslan Qayyum, Faisal Rehman, Saad Mustafa, and Junaid Shuja, "Adaptive thresholds for improved load balancing in mobile edge computing using K-means clustering", Telecommunication Systems
- Syed Muhammad Mohsin, Tahir Maqsood and Sajjad Ahmad Madani, "Towards Energy Efficient Cloud: A Green and Intelligent Migration of Traditional Energy Sources", Energies
- M. Umar, I. Hussain, T. Mahmood, Hamid Turab Mirza, C. M. N. Faisal, "Design Strategies to Minimize Mobile Usability Issues in Navigation Design Patterns", Information, pp: 732, Vol: 15, Issue: 11, ISSN: 2078-2489, DOI: <https://doi.org/10.3390/info15110732>, Impact Factor: 2.6
- A. Bilal, Hamid Turab Mirza, I. Hussain, A. Ahmad, "Investigating Influence of Google-Play Application Titles on Success", Big Data Research, Elsevier, pp: 100443, Vol: 36, ISSN: 2214-5796, Impact Factor: 3.3
- Saman Safdar, "An Enhanced Mechanism for Advanced Persistent Threat (APT) Detection based on Deep Learning", Spectrum of engineering sciences
- Muhammad Awais Shoukat, Allah Bux Sargano, Alexander Malyshev, Lihua You, Zulfiqar Habib, "SS3DNet-AF: A Single-Stage, Single-View 3D Reconstruction Network with Attention-Based Fusion", Applied Sciences: Advances in Computer Graphics and 3D Technologies, pp: 1-16, Vol: 14, Issue: 11424, ISSN: 2076-3417 (Online), DOI: <https://doi.org/10.3390/app142311424>, Impact Factor: 2.5
- Naheed Akhtar, Muhammad Hussain, Zulfiqar Habib, "Two-Stage Detection and Localization of Inter-Frame Tampering in Surveillance Videos Using Texture and Optical Flow", Mathematics: Special Issue "Computer Vision and Pattern Recognition with Applications", pp: 27, Vol: 12, Issue: 22, ISSN: 2227-7390 (Online), DOI: <https://doi.org/10.3390/math12223482>, Impact Factor: 2.3

Following are the publications from the faculty of computer science

- S. Yasin, A. Othmani, B. Mohamed, I. Raza, Syed Asad Hussain, "Depression Detection and Subgrouping by Using Active and Passive EEG Paradigms", Multimedia Tools and Applications, Springer, Impact Factor: 3.6
- Umar Draz, Tariq Ali, Sana Yasin, Muhammad Hasanain Chaudary, Muhammad Ayaz, El-Hadi M. Aggoune and Isha Yasin, "Hybridization and Optimization of Bio and Nature-Inspired Metaheuristic Techniques of Beacon Nodes Scheduling for Localization in Underwater IoT Networks", MDPI Journal: Mathematics
- Arif Husen, Muhammad Hasanain Chaudary, Farooq Ahmad and Abid Sohail, "Holistic learning and optimization scheme for wireless networks", WILEY Journal: Transactions on Emerging Telecommunications Technologies
- Rooh Ullah, Beenish Ayesha Akram, Amna Zafar, Atif Saeed, Sultan H. Almotiri, Mohammed A. Al Ghamdi, "An Efficient Routing Scheme Based on Node Density for Underwater Acoustic Sensors Networks", KSII Transactions on Internet and Information Systems, Vol. 18, No. 5, May 31, 2024.
- Shavez Mushtaq Qureshi, Dr. Atif Saeed, Sultan H. Almotiri, Dr. Farooq Ahmad, Mohammad A. Al Ghamdi, "Deepfake forensics: a survey of digital forensic methods for multimodal deepfake identification on social media", PeerJ Computer Science, 2024.
- Muhammad Junaid Anjum, Fatima Tariq, Khadeeja Anjum, Momina Shaheen, Saman Safdar, "Identification of Diseases caused by non-Synonymous Single Nucleotide Polymorphism using Machine Learning Algorithms", VFAST Transactions on Software Engineering, pp: 312-325, Vol: 12, Issue: 4, DOI: <https://doi.org/10.21015/vtse.v12i4.1984>
- Muhammad Ahmed, Adnan Ahmad, Furkh Zeshan, Hamid Turab, "Blockchain Basics: A Deep Dive Into the Blocks, Chains, and Consensus", Decentralizing the Online Experience With Web3 Technologies, published by: IGI-Global, pp: 33, Standard: 13: 9798369315323

Newsletter TEAM



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