



EXPERIENCE

May 2023 – Present

Acting Director, Center for Artificial Intelligence, Prince Mohammad Bin Fahd University, KSA

August 2022 – Present

Assistant Professor (Adjunct), Department of Computer Science, Superior University, Lahore, Pakistan

May 2021 – April 2023

Post-Doctoral Fellow/ Researcher (FRQNT), University of Quebec, Canada

June 2021 – Nov. 2021

Machine Learning Engineer for Drug Discovery, All4Cure - Health Information Technology Company, USA

Jan. 2019 – May 2021

Research Coordinator & Lecturer, Deanship of Research and Graduate Studies, Prince Mohammad bin Fahd University, KSA

Jan. 2014 – Jan. 2016

Lab Instructor, College of Computer Engineering and Sciences, Prince Mohammad Bin Fahd University, KSA

Sep. 2011 – Jan. 2022

Offshore Freelancer, 150+ Freelance Projects with 3000+ hours of work at UpWork.com

Aug. 2010 – Sep. 2011

Cloud EHR Engineer, CareCloud - MTBC® A Unique Healthcare IT Company in USA

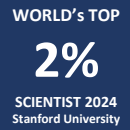


My Research



My Videos

Ghazanfar Latif, Ph.D.



🏠 Canadian Permanent Resident (AI Pilot Program 2021)

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SUMMARY

Highly motivated and qualified with extensive experience in higher education, ranging from teaching, research, innovation, curriculum development, and academic administration.

| | | | |
|--|--|--|--|
| 8+ years of Advanced Research/ Teaching Experience | Published 100+ ISI/Scopus Research Articles in AI/ML/IoT | Granted 11 US Patents in AI/IoT/Robotics | Google Scholar h-index 24 and i-10 index 47 with 1786 citations |
| 10+ years of offshore AI/ CV/Cloud Industry Experience | Delivered presentations in 20+ Conferences | Acquired 8 International Research Grants | 7 times 1 st Position in International Events/Conferences |
| 6 Professional Certifications and 3 Trainings | Designed 13 Courses and Labs Syllabi | 14 different Courses and 7 Labs Taught | Worked on 150+ ML/AI/IT industry projects as Freelance |
| Certified Instructor for 20+ CISCO courses | 30+ Senior Design Projects Supervision | Chaired 7+ Technical Committees | Merit Scholarships for MS, BS, FSc |

RESEARCH INTEREST

- 🔍 Artificial Intelligence
- 🔍 Medical Imaging
- 🔍 Internet of Things
- 🔍 Robotics
- 🔍 Deep Learning
- 🔍 Computer Vision
- 🔍 Cloud Computing
- 🔍 Smart Cities
- 🔍 Machine Learning
- 🔍 Generative AI
- 🔍 Cybersecurity
- 🔍 AR/VR/MR

EDUCATION

UNIVERSITY OF QUEBEC, CHICOUTIMI, Canada

Département d'Informatique et de Mathématique (DIM) (2021-2023)
Post-Doctoral Fellow (AI / ML / DL – Minerals Recognition) *FRQNT Funding*

UNIVERSITY OF MALAYSIA, SARAWAK, Malaysia

Faculty of Computer Science and Information Technology (2016-2021)
PhD (Computer Science – Specialization in AI for Medical Diagnostics) *Gold Medalist*

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS, Saudi Arabia

Information Computer Science Department (2011-2014)
MS (Computer Science – Specialization in Machine Learning) *Full Scholarship*

NATIONAL UNIVERSITY COMPUTER AND EMERGING SCIENCES, PK

Computer Sciences Department (2006-2010)
BS (Computer Science) *Full Scholarship*

PUNJAB COLLEGE OF SCIENCE AND TECHNOLOGY, Pakistan

Pre-Engineering Department (2004-2006)
FSc (Pre-Engineering) *Full Scholarship*

ACHIEVEMENTS AND AWARDS

- 2024**
1. My name has been included in the 2024 **World's Top 2% Scientists** by Stanford University.
 2. Awarded **Gold Medal** with Honor/Congratulations in 49th **Innovations Exhibition Geneva**, Switzerland where total 1,035 inventions were presented (April 17-22, 2024).
- 2023**
3. My patented project named BlindLine **won the first position** in NEOM OXAGON Hackathon 2023 for Technology organized by the Ministry of Education Saudi Arabia out of 800 applications.
 4. Received most **Research Productivity Award 2022-2023** from Prince Mohammad bin Fahd University.
- 2022**
5. Received an **honorary membership** of National Academy of Inventors (NAI), A member organization comprising most reputable U.S. and international universities.
- 2021**
6. Received **Permanent Residence** in Canada based on Special Artificial Intelligence Pilot Program.
 7. Received **best PhD award along with Gold Medal** and Shield in the field of Machine Learning for Medical Diagnostics from University of Malaysia Sarawak, Malaysia.
 8. Received most **Research Productivity Award 2020-2021** from Prince Mohammad bin Fahd University.
- 2019**
9. Got **best research paper award** in Current Research on Information Technology, Mathematics Sciences, Science and Technology (CRIMSTIC 2019), Melaka, Malaysia.
- 2018**
10. Got **best research paper award** in 7th International Conference on Computer Science, Engineering and Technologies (ICCSET 2018), Bangkok, Thailand.
 11. Got **Bronze Award** in Innovation & Technology Exposition (InTEX 2018), Kuching, Malaysia for my research poster on “Automated Brain Tumor Detection, Analysis, and Visualization System”.
- 2011**
12. Got full time **scholarship** for MS in Computer Science from King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.
- 2010**
13. Got **1st position** in Software & Hardware Competition in mega event ITEC-2010 held at NED University of Engineering and Technology, Karachi, Pakistan.
 14. Got **1st position** in ACM Software Project Competition by presenting my Final Year Project “Brain Inspector” held in FAST-NUCES, Islamabad, Pakistan.
 15. Got **1st position** in Software Competition while overall in Hardware & Software Competition got 2nd position in NUTEC-2010 Peshawar, Pakistan.
 16. My Final Year Project “Brain Inspector” short-listed in Top four Software Project of Pakistan for **Microsoft Imagine Cup 2010** by Microsoft.
- 2009**
17. Got **best Marketing Promotional Campaign** and best Group Chemistry Merit Certificates in Marketing Mavericks PromoPower Competition 2009 organized by National University of Computer and Emerging Sciences, Islamabad, Pakistan.
- 2008**
18. Remained two times in FAST-NUCES **Dean’s Honor List** during BS-CS Degree, National University of Computer and Emerging Sciences, Islamabad Pakistan.
- 2006**
19. Got full merit **Scholarship** of 1.3 million rupees for BS Computer Science at National University of Computer and Emerging Sciences, form Ministry of Information Technology, Pakistan.
- 2004**
20. Got full merit **scholarship** for Higher Secondary Diploma (FSc) Pre-Engineering at Punjab College of Information Technology Multan from Punjab Group of Colleges, Pakistan.

ADVANCED SKILLS / TOOLS

- **Research Tools:** Anaconda, TensorFlow, OpenCV, Pandas, skLearn, pyTorch, NumPy, Keras, MATLAB, etc.
- **Machine Learning/ Deep Learning:** CNN, RNN, LSTM, MLP, Regression, Decision Trees, etc.
- **Virtual/Augmented Reality:** Oculus, Vision Pro, VIVE Elite, KatWalk VR, VIVE Cosmos, etc.
- **Robotics/Embedded Systems:** Raspberry Pi, Arduino, Temi Robot, MakeBlock, Dextor
- **Programming Languages:** Python, C, C++, VB, C#, Shell, Bash, Java, PHP, ASP.net, JavaScript, XML
- **Cloud Services:** Amazon Web Services, Rackspace, Windows Azure, Linode, GoogleCloud
- **Deployments:** Apache, IIS, MS-RDS, Live Streaming, Wowza, Red5, Adobe Encoder, Docker
- **Development Tools:** VS .NET, SQL Management Studio, NetBeans, Dreamweaver, Python IDE
- **Design Tools:** MS Visio, MS Project, Photoshop, Fireworks, Zend Framework, Premiere Pro
- **Operating Systems:** MS Server 2020/2016/2012, Linux, Raspbian, Ubuntu, RedHat, Android
- **Database Management:** MS SQL, My SQL, SPARQL, Oracle, phpMyAdmin
- **Technical Support:** Application Deployment and Bugs Fixing, Cloud Computing

PROFESSIONAL TRAININGS COMPLETED

- | | |
|--|--------------------------|
| 1. Quality Practitioner Training Program for NCAAA Accreditation | (2 to 3 November, 2022) |
| 2. Palo Alto Networks Cybersecurity Academy, Saudi Arabia | (7 to 10 April, 2020) |
| 3. Windows Server Administration, Koing Solutions, Dubai, UAE | (11 to 19 March, 2016) |
| 4. CISCO CCNA Training, PMU, Khobar, Saudi Arabia | (18 to 21 January, 2016) |

INTERNATIONAL CERTIFICATIONS COMPLETED

- | | |
|--|---------------------|
| 1. Cloud Infrastructure and Services (EMC) | (April 23, 2016) |
| 2. IOE (Internet of Everything - Cisco) | (February 19, 2016) |
| 3. CCNA (Introduction to Networks - Cisco) | (February 25, 2016) |
| 4. ITE (Information Technology Essentials - Cisco) | (January 26, 2016) |
| 5. Entrepreneurship (Cisco) | (February 19, 2016) |
| 6. RackSpace Cloud Computing (RackSpace) | (December 11, 2015) |

PROFESSIONAL ASSOCIATIONS

- | | |
|---|------------------|
| ▪ National Academy of Inventors (NAI) - Honorary membership | (2022-Till Date) |
| ▪ IEEE Full Membership | (2017 – 2021) |
| ▪ ACM Honorary Membership | (2011-2012) |

EXPERIENCE: TEACHING / RESEARCH / INDUSTRY

Acting Director, Center for Artificial Intelligence

(May 2023 – Present)

Prince Mohammad bin Fahd University (PMU), Saudi Arabia

- PMU (established in 2006) is ranked #1 in Arab World by THE and #590 around the World by the QS University Rankings.

Under my supervision, the center established two cutting-edge labs to boost AI research and innovation at PMU in 2023. These labs are equipped with state-of-the-art technologies and machinery to help researchers perform different experiments Devices (Olympus Microscope for Medical Imaging Data, Olympus Scanner, Temi Robot, Apple Vision Pro, Meta Oculus, VIVE Cosmos, VIVE Elite, Realwear, KATwalk VR, HPC Server with 16 Tesla V100 GPUs, etc.).

The Center for Artificial Intelligence planned following activities for 2024 under my supervision:

- Develop a Generative AI model to be integrated with Humanoid Robots for advising.
- Build a PMU Campus Live Virtual Tour by current AI Center TEMI robots.
- Deliver a series of Workshops/Seminars (4) to promote awareness of Generative AI.
- Organize and host an International Conference on broad AI topics in collaboration with CCES.
- Enhance e-learning quality by using VR technology to establish a prototype for virtual classrooms.
- Conduct and sponsor a regional competition in AI to promote the PMU AI center.
- Recruit top 1% four researcher to be affiliated with the AI center.
- Increase Research Productivity (25 articles) of faculty involved with the center.

I played a key role in the development of the following degree plans at PMU:

- BS AI Degree Plan
- MS AI Degree Plan
- PhD AI Degree Plan

I played a supervising role in the establishment of following research Labs at PMU:

- AI HPC Lab (Server with 16 V100 GPUs, Olympus Microscope, Olympus Scanner,)
- AI VR/AR Lab (Temi Robot, Oculus, VIVE Cosmos, VIVE Elite, Realwear, KATwalk, NI Sound Processing)
- Robotics Lab (Zara Robot, NAO Robot, 3D Scanner, 3D Printer, PCB Printer, Quad Copter/Research Drones)
- Embedded Systems Lab (Rasberry Pi Kits, Arduino Kits, Dexter Kits, 50+ IoT sensors and other microcontrollers)

I also taught following courses at PMU:

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|----------------------------|----------------------------|------------------------------------|
| 🔗 Artificial Intelligence | 🔗 Computer Vision | 🔗 Machine Learning |
| 🔗 System Programming | 🔗 Computer Organization | 🔗 Business Intelligence |
| 🔗 Requirements Engineering | 🔗 Assessment III (Project) | 🔗 Software Architecture and Design |

I also conducted several workshops at PMU and other places:

- | | |
|---|-------------------|
| ▪ Future Applications of Artificial Intelligence | (PMU, KSA) –2024 |
| ▪ The Unstoppable Rise of Generative AI, Featuring ChatGPT Workshop | (PMU, KSA) - 2023 |
| ▪ Patent Success Story: Ideas, Filing and Benefits | (PMU, KSA) – 2023 |
| ▪ Research Webinar: Glioma Tumor Classification using Deep Learning | (PMU, KSA) – 2023 |

Post-Doctoral Fellow/ Researcher**(May 2021 – April 2023)****University of Quebec, Canada**

Conducting research and development on the industry-funded project on recognition of mineral grains from images by exploiting Artificial Intelligence and Machine Learning methods. The main focus of the project is to create new efficient solutions based on deep learning algorithms for Minerals Recognition. This project was directly funded by the Quebec, Canada Government for Nature and Technologies (FRQNT).

Mainly, I worked on the following during the fellowship:

- Collect mineral grain images using Olympus Microscope.
- Collection of grains annotations from the Scanning Electron Microscopy (SEM).
- Preprocessing the grains and adjustment of alignment using different image processing techniques.
- Grains segmentation using different computer vision techniques (superpixels, region growing, etc.).
- Feature extraction using Deep Learning, Color, Shape and Texture of the mineral grains.
- Classification of mineral grains using deep learning models and standard machine learning methods.

Assistant Professor (Adjunct)**(August 2022 – Present)****Superior University, Lahore, Pakistan**

Supervise and assist PhD and Master degree students with their research projects. My role involves guiding students through advanced research methodologies, providing technical expertise in algorithm development, machine learning, and data analytics, and facilitating the design and implementation of experimental frameworks. I also support students in the rigorous analysis and interpretation of complex datasets, ensuring the robustness and validity of their findings. Furthermore, I assist in the preparation of research articles and publications, ensuring that their work adheres to the highest academic standards and makes significant contributions to the field of computer science.

Machine Learning Expert – Engineer (Offshore)**(June 2021 – Nov. 2021)****All4Cure - Health Information Technology Company in USA**

I was the lead member of the team for the drugs entity and other metrics extraction from the progress notes for drugs discovery using the Natural Language Processing (NLP) and other machine learning techniques. The project was initially started for the Multiple Myeloma cancer patients progress notes which was extended to other types of Cancers. The system was able to visually capture entire cancer history by compiling medical records from all of your oncologists into a single comprehensive display. Input from other participants including patients, clinicians and researchers provide ideas that you and your doctor may wish to consider.

Research Coordinator & Lecturer– Deanship of Research and Graduate Studies**(Jan. 2019 – May 2021)****Prince Mohammad bin Fahd University (PMU), Saudi Arabia**

As Research Coordinator, main responsibilities included; overseeing and managing research projects, ensuring compliance for articles publication and funding. Provide support to researcher professors for interdisciplinary research, proposal development, grant applications, and budgeting, while also coordinating communication and collaboration among researchers and external partners.

At PMU, I also taught following courses:

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|----------------------------|-------------------------|--------------------------------|
| 🔗 Artificial Intelligence | 🔗 Business Intelligence | 🔗 Machine Learning |
| 🔗 Introduction to IT | 🔗 Computer Vision | 🔗 Software Project Management |
| 🔗 System Programming | 🔗 Computer Organization | 🔗 Introduction to Cryptography |
| 🔗 Requirements Engineering | 🔗 Web Server Management | 🔗 Web Programming |

I played major role as key member in achieving following accreditations for PMU:

- ABET accreditation for Information Technology Department (2016-2028)
- ABET accreditation for Computer Engineering Department (2019-2028)
- NCAAA accreditation for the College of Computer Engineering and Sciences (2021-2026)

I developed the following new Courses at PMU:

- ☞ Deep Learning BS-AI
- ☞ Scripting Languages for AI (BS-AI)
- ☞ Introduction to Data Science (BS-CS)
- ☞ Machine Learning (MS-AI)
- ☞ Computer Graphics (MS-AI)
- ☞ Computer Vision (MS-AI)

I also conducted following workshops at PMU and other places:

- Machine Learning for Researchers (VMI, USA) – 2021
- Linux Administration (Ministry of IT, KSA) – 2020
- Machine Learning Workshop: Build your Research Skills (PMU, KSA) – 2019
- Java Programming for Advance Learners (PMU, KSA) – 2019
- Python Programming for IoT (PMU, KSA) – 2018
- System-On-Chip: Raspberry Pi (PMU, KSA) – 2018

Lab Instructor – College of Computer Engineering and Sciences

(Jan. 2014 – Dec 2015)

Prince Mohammad bin Fahd University (PMU), Saudi Arabia

The teaching duties as Lab Instructor involved conducting hands-on laboratory sessions for Computer Science, IT, Computer Engineering courses, guiding students through practical exercises, and demonstrating the use of relevant software, programming languages, and equipment. Provide individualized assistance to students, ensuring a safe and productive lab environment while also managing and maintaining laboratory equipment and software.

I taught following courses Labs at PMU:

- ☞ Embedded Systems Lab
- ☞ Cloud Computing Lab
- ☞ System Programming Lab
- ☞ Computer Science II Lab
- ☞ Web Programming Lab
- ☞ Programming Languages Lab
- ☞ Data Structures Lab
- ☞ Computer Science I Lab
- ☞ Web Server Management Lab

I also developed manuals for the following new Labs at PMU:

- ☞ Embedded Systems Lab
- ☞ Cloud Computing Lab
- ☞ System Programming Lab

Cloud EHR Engineer

(Aug. 2010 – Sep. 2011)

CareCloud - MTBC® A Unique Healthcare IT Company (<http://www.carecloud.com/>)

I was part of the team who successfully designed, implemented, deployed and administered Cloud Based EHR/EMR applications by using the AWS EC2, VPC, CloudWatch, S3, CloudFront, SES, SNS, IAM, VPC Services. I had mainly following responsibilities for Web based and Desktop Based Cloud EHR Applications:

- Designing, developing, de-bugging and maintaining medical applications using C# and MS SQL.
- Work with the team to write test plans for components and overall system.
- Testing and installation of the Company's software's into the client machines.
- Setup of Auto Snapshot, AMI creation and deletion for backups, Different Cloud Watch Alarms.
- Setup of Auto Synchronization between the Live and Backup Servers.
- Maintaining the Security of the Server according the USA HIPPA Compliance.
- Optimize the Cost and enhance the performance of EC2 Servers through different ways.

Teacher Assistant (NUCES)

(Sep. 2008 – May 2010)

National University of Computer and Emerging Sciences (NUCES)

At NUCES, I was teaching assistant for the following courses:

- | | |
|-----------------------------|-------------|
| 1. Digital Image Processing | Spring 2010 |
| 2. Software Engineering | Spring 2010 |
| 3. Linear Algebra | Fall 2009 |
| 4. Software Engineering | Spring 2009 |
| 5. Numerical Analysis | Fall 2008 |

Quality Assurance Officer**(June 2007 – Sep. 2007)****MINISTRY OF IT (Pakistan) & FAST-NUCES**

Worked as a Quality Assurance Officer for Outreach Scholarship Program supported by Ministry of IT and FAST National University of Computer and Emerging Sciences, in four Colleges of Dera Ghazi Khan Region.

CISCO Certified Instructor**(March 2016 – Present)****Cisco Networking Academy**

Eligible to teach following CISCO courses:

- | | |
|---|---|
| 1. IT Essentials: Hardware and Software | 12. Be Your Own Boss |
| 2. CCNA R&S: Introduction to Networks | 13. Packet Tracer Know How 1 |
| 3. CCNA R&S 6.0 Bridging | 14. Packet Tracer Know How 2 |
| 4. Networking Essentials | 15. Mobility Fundamentals |
| 5. Introduction to the Internet of Everything | 16. Partner: NDG Linux Essentials |
| 6. Introduction to IoT | 17. Partner: NDG Linux I |
| 7. Entrepreneurship | 18. Partner: NDG Linux II |
| 8. Introduction to Cybersecurity | 19. Partner: CPA - Programming in C++ |
| 9. Cybersecurity Essentials | 20. Partner: CLA - Programming in C |
| 10. Get Connected | 21. CCNA Discovery 1: Networking for Home |
| 11. Community: Smart Grid Essentials | 22. CCNA Exploration 1: Network Fundamental |

RESEARCH GRANTS

Following are the list of research funding I received for different projects:

- 2023**
1. Ghazanfar Latif (PI), 22,550 (SAR), Multilevel Medical Image Steganography: Secured Health Records in medical images without degrading their Quality. *PMU Cybersecurity Grants 2022, Prince Mohammed bin Fahd University, Saudi Arabia.*
 2. Ghazanfar Latif (PI), 18,780 (SAR), Innovative Education System for the Blind: AI based Arabic Braille Language System. *Prince Mohammad Bin Fahd Center for Futuristic Studies (PMFCFS) Research Grant 2022, Prince Mohammed bin Fahd University, Saudi Arabia.*
- 2021**
3. Ghazanfar Latif (project team member), 90,800 (SAR), Fast Diagnosis of Covid-19 using Convolutional Neural Networks. *Qassim University, Grant # UCC-BS-2020-1-3-10146 from Ministry of Higher Education, Saudi Arabia.*
 4. Ghazanfar Latif (project team member), 381,000 (CAD \$) valued grant that team secured at the “Fonds de recherche du Québec – Nature et technologies”, University of Quebec, Canada.
- 2020**
5. Ghazanfar Latif (PI), 27,500 (SAR), Medical Image Processing: Brain Tumor, Skin Cancer and Retinopathy Detection and Classification. Prince Mohammed bin Fahd University.
 6. Ghazanfar Latif (Co-PI), 47,900 (SAR), Arabic Sign Language Recognition. Prince Mohammed bin Fahd University, Saudi Arabia.
 7. Ghazanfar Latif (Co-PI), 20,500 (SAR), Evaluation of Machine Learning Techniques for Enhanced Image Understanding in Several Domains. Prince Mohammed bin Fahd University, Saudi Arabia
- 2017**
8. Ghazanfar Latif (Co-PI), 56,750 (SAR), A Study on the Confused Handwritten Indian (Arabic) Numerical images. Deanship of Research, Prince Mohammed bin Fahd University, Saudi Arabia.

RESEARCH PROJECT SAMPLES

1. **Post-Doctoral Project:** Mineral Grains Recognition and Classification (ML/AI)
2. **PhD Thesis:** Brain Tumor Classification using Deep Learning (ML / AI)
3. **MS Thesis:** Brain MRI Tumor Analysis and Classification using Machine Learning (ML / AI)
4. **BS Project:** Brain Inspector - Detection and 3D Visualization of Brain Tumor from MRI (AI)
5. Diabetic Retinopathy Detection using AI/Machine Learning (AI/ML)
6. Medical Images (CT/MRI, Ultrasound, Digital) Classification (AI)
7. Ultrasound Image Denoising and Despeckling (CV)
8. Text Classification (Tweets/Arabic Emails, Hate Speech) (NLP)
9. Plant Leaf Classification for Plant Diseases Detection (AI / ML)
10. Arabic Handwritten Text/Numerals Recognition (ML)
11. Arabic Writer Identification (ML/ CV)
12. Arabic Sign Language Recognition (ML / DL)

EDITORIAL POSITIONS

- 2024
 1. Editorial Board Member, Discover Artificial Intelligence, Springer Nature Journal.
 2. Guest Editor, Algorithms Journal Special Issue (IF: 2.3) titled: “Advancing Smart Health and Biomedical Research with Artificial Intelligence Algorithms”.
 3. Chair, Publication Committee, 16th IEEE International Conference on Computational Intelligence and Communication Networks (CICN 2024), UAE/India.
- 2023
 4. Guest Editor, Diagnostics Journal Special Issue (IF: 3.99) titled: “2nd Edition: AI/ML-Based Medical Image Processing and Analysis”.
- 2022
 5. Chair, Technical Program Committee, 14th IEEE CICN Conference, Saudi Arabia.
 6. Session Chair, Image Processing, Signal processing and Computer Vision Track, 14th IEEE CICN Conference.
 7. Guest Editor, Diagnostics Journal Special Issue “AI/ML-Based Medical Image Processing and Analysis”.

INSTITUTIONAL SERVICE

- 2024
 1. Chair, Center for Artificial Intelligence Initiatives Committee, Prince Mohammad Bin Fahd University (PMU).
 2. Member of University Dean’s Council to present Center for Artificial Intelligence at PMU.
 3. Member of National Academy of Inventors (NAI) PMU International Patent Award Committee.
 4. Member of Artificial Intelligence Department Council College of Computer Engineering and Sciences, PMU.
 5. Member of University Level Core Courses Curriculum Review Committee at PMU (VP Initiative).
 6. Member of Humanoid Robots and Flying Taxi Projects Committee at PMU (VP Initiative).
 7. Member of Artificial Intelligence Department Curriculum Review at PMU.
 8. Member of Research Journal Establishment Committee at PMU.

- 2023** 9. Chair, Center for Artificial Intelligence AR/VR and HPC Labs Establishment Committee at PMU.
10. Chair, Center for Artificial Intelligence 2023 Initiatives Committee, PMU.
- 2022** 11. Member of Scientific Research Committee, Deanship of Research and Graduate Studies, PMU.
- 2020** 12. Chair of International Student Competitions Committee (PMU, KSA).
13. Lead Member of BS and MS in AI programs design Committee (PMU, KSA).
14. Member of Robotics Lab Committee (PMU, KSA).
15. Member of AI Lab Committee (PMU, KSA).
- 2019** 16. Member of Scientific Research Committee (PMU, KSA).
17. Member of CCES Workshops Committee (PMU, KSA).
- 2015** 18. Member of ABET Accreditation Committee (PMU, KSA).
19. Member of CCES Labs Committee (PMU, KSA).

INTERNATIONAL CONFERENCES ATTENDED AS PRESENTER

- 2024** 1. 49th International Exhibition of Inventions Geneva, Palexpo, Geneva, Switzerland.
2. 4th International Conference on Innovative Research in Applied Science, Engineering and Technology - IRASET'2024. Fes, Morocco, (IEEE).
- 2023** 3. 5th International Conference on Engineering Education and Innovation (ICEEI), Bali, Indonesia, (SPIE).
4. 9th International Conference on Modeling, Simulation and Applied Optimization (ICMSAO), Morocco, (AIP).
5. 2nd DeepFeast - LEAP Conference for Data and Artificial Intelligence, Riyadh, KSA.
- 2022** 6. 14th International Conference on Computational Intelligence and Communication Networks, KSA, (IEEE).
- 2020** 7. International Conference on Research, Innovation and Vision for the Future, Vietnam, (IEEE – Virtual).
8. International Conference on Communication, Computing and Electronics Systems (ICCCES), Coimbatore, India, (IEEE – Virtual).
9. 3rd SMART Cities Symposium, IET Digital Library, Manama, Bahrain, (IET Inspect – Virtual due to COVID).
- 2019** 10. 4th Current Research on Information Technology, Mathematics Sciences, Science and Technology, Malaysia.
11. International Conference on Computing and Big Data (ICCBD), Charleston, South Carolina, USA, (ACM).
- 2018** 12. 4th International Conference on Electrical and Electronic Engineering, Ankara, Turkey, (IEEE).
13. 8th International Conference on Biomedical Engineering and Technology (ICBET), Bali, Indonesia, (ACM).
14. 16th International Learning and Technology Conference: Artificial Intelligence and Machine Learning: Intelligence is Power, January, Jeddah, KSA, (Elsevier).
15. 7th International Conference on Computer Science, Engineering and Technologies (ICCSET), Bangkok, Thailand, (Scopus).
- 2017** 16. 4th International Conference on Engineering Technologies and Applied Sciences (ICETAS), Bahrain, (IEEE).
17. 10th International Conference on Information Technology in Asia (CITA'17), Kuching, Malaysia, (Scopus).
18. 2nd International Conference on Emerging Research for Sustainable Economic Development, Bahrain.
- 2013** 19. International Conference on Technology for Helping People with Special Needs (ICTHP), Riyadh, KSA.
- 2012** 20. 3rd Scientific Conference, Ministry of Higher Education, Khobar, KSA.

US PATENTS / RESEARCH PUBLICATIONS

US Patents

(Total Patents Granted: 5)

- 2023**
1. U.S. Patent No. US11829959B1: **Ghazanfar Latif**, Ghassen Ben Brahim (2023). System and methods for fully autonomous potholes detection and road repair determination. *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US11829959B1>.
 2. U.S. Patent No. US11748588B1: **Ghazanfar Latif**, Ghassen Ben Brahim (2023). Automated Secure Paper Tray Access and Paper Quota Management System for Public Printers. *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US11748588B1>.
 3. U.S. Patent No. US11755687B2: Khan, M. A., Mohammad, N., Brahim, G. B., Bashar, A., **Ghazanfar Latif**. (2023). Text independent writer verification method and system. *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US20230112880A1>.
- 2022**
4. U.S. Patent No. US11227387B2: **Ghazanfar Latif**, (2022). Multi-stage brain tumor image processing method and system. *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US11227387B2>.
 5. U.S. Patent No. US11393361B1: **Ghazanfar Latif**., Alghazo, J., Alufaisan, S., Albur, W., & Alsedrah, S. (2022). Braille Reader System using Deep Learning Framework. *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US11393361B1>.

CIP US Patents

(Total Patents Granted: 6)

- 2024**
6. U.S. Patent No. 11,914,673: Khan, M. A., Mohammad, N., Brahim, G. B., Bashar, A., & **Ghazanfar Latif** (2024). System to identify authorship of handwritten text based on individual alphabets, *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US11914673B2>.
 7. U.S. Patent No. 12,019,709: Khan, M. A., Mohammad, N., Brahim, G. B., Bashar, A., & **Ghazanfar Latif** (2024). Writer verification method for handwritten cursively connected Arabic, *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US12019709B1>.
 8. U.S. Patent No. 12,019,708: Khan, M. A., Mohammad, N., Brahim, G. B., Bashar, A., & **Ghazanfar Latif** (2024). Text independent writer verification device for handwritten cursively connected Arabic words, *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US12019708B1>.
 9. U.S. Patent No. 12,039,006: Khan, M. A., Mohammad, N., Brahim, G. B., Bashar, A., & **Ghazanfar Latif** (2024). Writer verification device for Arabic handwriting, *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US12039006B1>.
 10. U.S. Patent No. 12,045,313: Khan, M. A., Mohammad, N., Brahim, G. B., Bashar, A., & **Ghazanfar Latif** (2024). Verification system for handwritten Arabic text, *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US12045313B2>.
 11. U.S. Patent No. 12,045,312: Khan, M. A., Mohammad, N., Brahim, G. B., Bashar, A., & **Ghazanfar Latif** (2024). Text verification device with battery power supply, *Washington, DC: U.S. Patent and Trademark Office*. <https://patents.google.com/patent/US12045312B2>.

International Journal Articles (Total: 49 – IF: 90.26, Corresponding Author: 96%, First Author 63%)

- 2024 12. **Ghazanfar Latif**, Bouchard, K., Maitre, J. *et al.* A framework for microscopic grains segmentation and Classification for Minerals Recognition using hybrid features. *Earth Sci Inform* (2024). <https://doi.org/10.1007/s12145-024-01478-1>.
(*ISI Impact Factor:2.7*).
13. **Ghazanfar Latif**, Alghazo, J., Khan, M. A., Brahim, G. B., Fawagreh, K., & Mohammad, N. (2024). Deep convolutional neural network (CNN) model optimization techniques—Review for medical imaging. *AIMS Mathematics*, 9(8), 20539-20571.
(*ISI Impact Factor:1.8*).
14. Hasanaath A.A., Mohammed A.S, **Ghazanfar Latif**, Sherif E. A, Alghazo J., Hussain A. A., (2024), Acute Lymphoblastic Leukemia detection using Ensemble Features from multiple deep CNN Models, *Electronic Research Archive*, 32 (4), 2407-2423.
(*ISI Impact Factor:0.8*).
15. **Ghazanfar Latif**, Alghazo, J., Mohammad, N., Abdelhamid, S. E., Brahim, G. B., & Amjad, K. (2024). A Novel Fragmented Approach for Securing Medical Health Records in Multimodal Medical Images. *Applied Sciences*, 14(14), 6293.
(*ISI Impact Factor:2.838*).
16. Alghazo, R., **Ghazanfar Latif**; Mohammad, N., Alghazo, J., Pilotti, M. A. E., Deep Learning-based Arabic Sign Recognition System for Automated Communication with Hearing Impaired Individuals, *KSII Transactions on Internet and Information Systems* (in press).
(*ISI Impact Factor:1.20*).
- 2023 17. **Ghazanfar Latif**, Bashar, A., Awang Iskandar, D. N. F., Mohammad, N., Brahim, G. B., & Alghazo, J. M. (2023). Multiclass tumor identification using combined texture and statistical features. *Medical & biological engineering & computing*, 61(1), 45-59.
(*ISI Impact Factor: 3.079*).
18. Alghazo, J., **Ghazanfar Latif** (2023). Editorial: AI/ML-Based Medical Image Processing and Analysis. *Diagnostics*, 13(24), 3671.
(*ISI Impact Factor: 3.992*).
19. Mohammed, A. S., Hasanaath, A. A., **Ghazanfar Latif**, & Bashar, A. (2023). Knee Osteoarthritis Detection and Severity Classification Using Residual Neural Networks on Preprocessed X-ray Images. *Diagnostics*, 13(8), 1380.
(*ISI Impact Factor: 3.992*).
20. **Ghazanfar Latif**, Alghmgham, D. A., Maheswar, R., Alghazo, J., Sibai, F., & Aly, M. H. (2023). Deep learning in Transportation: Optimized driven deep residual networks for Arabic traffic sign recognition. *Alexandria Engineering Journal*, 80, 134-143.
(*ISI Impact Factor: 6.8*).
21. **Ghazanfar Latif**, Brahim, G. B., Abdelhamid, S. E., Alghazo, R., Alhabib, G., & Alnujaidi, K. (2023). Learning at Your Fingertips: An Innovative IoT-Based AI-Powered Braille Learning System. *Applied System Innovation*, 6(5), 91.
(*ISI Impact Factor: 3.8*).
22. **Ghazanfar Latif**, Nazeeruddin Mohammad, and Jaafar Alghazo. "DeepFruit: A dataset of fruit images for fruit classification and calories calculation." *Data in Brief* 50 (2023): 109524.
(*ISI Impact Factor: 1.2*).
23. **Ghazanfar Latif**, Sherif E. Abdelhamid, Khaled S Fawagreh, Ghassen Ben Brahim, Runna Alghazo (2023), Machine Learning in Higher Education: Students' Performance Assessment considering Online Activity Logs, *IEEE Access*, 11, 69586 - 69600.
(*ISI Impact Factor: 3.476*).
24. Alghazo, J., **Ghazanfar Latif**, Hammad, B., Al-Abed, M., Sibai, F., & Al-Kouz, W. (2023). Prediction of the Performance of a Sun Tracking Photovoltaic System using different Artificial Intelligence Techniques: Case Study in Zarqa, Jordan. *International Journal of Computing and Digital Systems*, 14 (1), 10337-10345.

- 2022 25. **Ghazanfar Latif**, Morsy, H., Hassan, A., & Alghazo, J. (2022). Novel Coronavirus and Common Pneumonia Detection from CT Scans Using Deep Learning-Based Extracted Features. *Viruses*, 14(8), 1667.
(ISI Impact Factor: 5.818).
26. **Ghazanfar Latif**, Faisal Yousif Al Anezi, D.N.F. Awang Iskandar, Abul Bashar, and Jaafar Alghazo. (2022). Recent Advances in Classification of Brain Tumor from MR Images – State of the Art Review from 2017 to 2021. *Current medical imaging*.
(ISI Impact Factor: 1.315).
27. **Ghazanfar Latif**, (2022). DeepTumor: Framework for Brain MR Image Classification, Segmentation and Tumor Detection, *Diagnostics*, 12, no. 11 (2022): 2888.
(ISI Impact Factor: 3.992).
28. **Ghazanfar Latif**, Sherif E. Abdelhamid, Roxane Elias Mallouhy, Jaafar Alghazo, and Zafar Abbas Kazimi. 2022. Deep Learning Utilization in Agriculture: Detection of Rice Plant Diseases Using an Improved CNN Model. *Plants* 11, no. 17: 2230.
(ISI Impact Factor: 4.658).
29. Butt, M. M., Iskandar, D. N. F., Abdelhamid, S. E., **Ghazanfar Latif**, & Alghazo, R. (2022). Diabetic Retinopathy Detection from Fundus Images of the Eye Using Hybrid Deep Learning Features. *Diagnostics*, 12(7), 1607.
(ISI Impact Factor: 3.992).
30. **Ghazanfar Latif**, Kévin Bouchard, Julien Maitre, Arnaud Louis Abel Back, L. Paul Bédard, Deep Learning–Based Automatic Mineral Grain Segmentation and Recognition, *Minerals*, 2022.
(ISI Impact Factor: 2.644).
31. **Ghazanfar Latif**, Ben Brahim, G., Iskandar, D. N. F., Bashar, A., & Alghazo, J. (2022). Glioma Tumors' Classification Using Deep-Neural-Network-Based Features with SVM Classifier. *Diagnostics*, 12(4), 1018.
(ISI Impact Factor: 3.992).
32. Majid Ali Khan, Nazeeruddin Mohammad, Ghassen Ben Brahim, Abul Bashar, **Ghazanfar Latif**, Writer Verification of Partially Damaged Handwritten Arabic Documents based on Individual Character Shapes, *PeerJ Computer Science*, 2022.
(ISI Impact Factor: 1.390).
33. Akaaboune, A., Elhassan, A., **Ghazanfar Latif** & Alghazo, J. (2022). PCA-WA Based Approach for Concurrent Control Chart Pattern Recognition. *Operations and Supply Chain Management: An International Journal*, 15(4), 474-485.
(Scopus Indexed Journal).
- 2021 34. **Ghazanfar Latif**, Al Anezi, F.Y., Sibai, F.N., Alghazo, J., (2021), Lung Opacity Pneumonia Detection with Improved Residual Networks. *Journal of Medical and Biological Engineering* 41, 581-591, Springer Nature.
(ISI Impact Factor: 1.553).
35. **Ghazanfar Latif**, Alghazo, J., Sibai, F. N., Iskandar, D. N. F., & Khan, A. H. (2021). Recent advancements in Fuzzy C-means based techniques for brain MRI Segmentation. *Current medical imaging*, 17(8), 917-930.
x *(ISI Impact Factor: 1.315)*.
36. Bashar, A., **Ghazanfar Latif**, Ben Brahim, G., Mohammad, N., & Alghazo, J. (2021). COVID-19 Pneumonia Detection Using Optimized Deep Learning Techniques. *Diagnostics*, 11(11), 1972.
(ISI Impact Factor: 3.992).
37. **Ghazanfar Latif**, Alghazo, R., Pilotti, M. A., & Brahim, G. B. (2021). Identifying " At-Risk" Students: An AI-based Prediction Approach. *International Journal of Computing and Digital System*.
(Scopus Indexed Journal).
38. **Ghazanfar Latif**, Alghazo, J., Mohammad, N., & Alghazo, R. (2021, July). Communicating with the Deaf and Hard of Hearing through Automatic Arabic Sign Language Translator. In *Journal of Physics: Conference Series* (Vol. 1962, No. 1, p. 012055). IOP Publishing.

- 2020 39. **Ghazanfar Latif**, N. Saravanakumar, Jaafar Alghazo, P. Bhuvaneswari, K. Shankar, Muhammad O. Butt, (2020), Scheduling and Resources Allocation in Network Traffic using Multiobjective, Multiuser Joint Traffic Engineering, *Wireless Networks*, 2020, Springer.
(ISI Impact Factor: 2.405).
40. **Ghazanfar Latif**, Iskandar, D. N. F. A., Alghazo, J., & Butt, M. M. (2020). Brain MR Image Classification for Glioma Tumor detection using Deep Convolutional Neural Network Features. *Current Medical Imaging*, DOI: 10.2352/J.ImagingSci.Technol.2019.63.2.020502.
(ISI Impact Factor: 1.315).
41. **Ghazanfar Latif**, Jaafar Alghazo, R. Maheswar, V. Vijayakumar, Mohsin Butt (2020), Deep Learning based Intelligence Cognitive Vision Drone for Automatic Plant Diseases Identification and Spraying, *Journal of Intelligent & Fuzzy Systems*, IOS Press.
(ISI Impact Factor: 1.637).
42. Roychowdhury, P., Alghazo, J. M., **Ghazanfar Latif**, (2020). POID: a passive all-optical inter-rack interconnect for data-centers. *Wireless Networks*, 1-13, In Press.
(ISI Impact Factor: 2.405).
43. Alghazo J, Rathee G, Gupta S, Tabrez Quasim M, Murugan S, **Ghazanfar Latif**, Dhasarathan V. (2020) A Secure Multimedia Processing through Blockchain in Smart Healthcare Systems. *Transactions on Multimedia Computing, Communications, and Applications (TOMM)*, ACM.
(ISI Impact Factor: 2.870).
44. **Ghazanfar Latif**, Mohammad, N., AlKhalaf, R., AlKhalaf, R., Alghazo, J., & Khan, M. (2020). An Automatic Arabic Sign Language Recognition System based on Deep CNN: An Assistive System for the Deaf and Hard of Hearing. *International Journal of Computing and Digital Systems*, 9(4), 715-724.
(Scopus Indexed Journal).
45. Danyah A. Alghmgham, **Ghazanfar Latif**, Jaafar Alghazo, Loay Alzubaidi, Autonomous Traffic Sign (ATSR) Detection and Recognition using Deep CNN, *Procedia Computer Science*, Volume 163, pp. 266-274, 2019.
(Elsevier, Scopus).
46. M. Mohsin Butt, **Ghazanfar Latif**, D.N.F. Awang Iskandar, Jaafar Alghazo, Adil H. Khan, Multi-channel Convolutions Neural Network Based Diabetic Retinopathy Detection from Fundus Images, *Procedia Computer Science*, Volume 163, pp. 283-291, 2019.
(Elsevier, Scopus).
47. Al-Hmouz, A., **Ghazanfar Latif**, Alghazo, J., & Al-Hmouz, R. (2020). Enhanced Numeral Recognition for Handwritten Multi-language Numerals Using Fuzzy Set-Based Decision Mechanism. *International Journal of Machine Learning and Computing*, 10(1).
(Scopus Indexed Journal).
- 2019 48. **Ghazanfar Latif**, Achyut Shankar, Jaafar M. Alghazo, V. Kalyanasundaram, C.S. Boopathi and M. Arfan Jaffar, I-CARES: Advancing Health Diagnosis and Medication through IoT, *Wireless Networks*, 2019, Springer.
(ISI Impact Factor: 2.405).
49. Al-Asad, J. F., Khan, A. H., **Ghazanfar Latif**, & Hajji, W. (2019). QR based Despeckling Approach for Medical Ultrasound Images. *Current medical imaging*, 15(7), 679-688.
(ISI Impact Factor: 1.315).
50. Alghazo, Jaafar M., **Ghazanfar Latif**, Loay Alzubaidi, and Ammar Elhassan. "Multi-Language Handwritten Digits Recognition based on Novel Structural Features." *Journal of Imaging Science and Technology* 63, no. 2 (2019): 20502-1.
(ISI Impact Factor: 0.46).
51. **Ghazanfar Latif**, Nazeeruddin Mohammad, Jaafar Alghazo, Roaa AlKhalaf, and Rawan AlKhalaf. "ArASL: Arabic Alphabets Sign Language Dataset." *Data in Brief* 23 (2019): 103777.

(Scopus Indexed Journal).

52. Loay Alzubaidi, **Ghazanfar Latif**, Real time License Saudi Plate Recognition Using Raspberry Pi, *International Journal of Advanced Trends in Computer Science and Engineering*, Volume 8 (1.1), pp. 42-47, 2019.

(Scopus Indexed Journal).

53. **Ghazanfar Latif**, Kinza Waqar, Shifa Khaja Muhieitheen, Sarah Imran Khan, Majid Ali Khan, Loay Alzubaidi, Enhanced Deep CNN Models for Underwater Fish Classification, *International Journal of Recent Technology and Engineering (IJRTE)*, 2019.

(Scopus Indexed Journal).

54. Loay Alzubaidi, **Ghazanfar Latif**, Jaafar M. Alghazo, Mohammed Zikria, Cloud-Based Interactive Hands free E-Learning Environment for Students with Disabilities, *International Journal of Recent Technology and Engineering (IJRTE)*, Volume-8 Issue-3.

(Scopus Indexed Journal).

- 2018** 55. **Ghazanfar Latif**, DNF Awang Iskandar, Jaafar M. Alghazo, and Nazeeruddin Mohammad, "Enhanced MR Image Classification Using Hybrid Statistical and Wavelets Features", *IEEE Access*, 7, 9634-9644, (2018).

(ISI Impact Factor: 4.098).

56. **Ghazanfar Latif**, DNF Awang Iskandar, Jaafar Alghazo, and Arfan Jaffar, "Improving brain MR image classification for tumor segmentation using phase congruency." *Current Medical Imaging Reviews* 14.6 (2018): 914-922.

(ISI Impact Factor: 1.315).

57. Alghazo, J. M., **Ghazanfar Latif**, Elhassan, A., Alzubaidi, L., Al-Hmouz, A., & Al-Hmouz, R. (2017). An Online Numeral Recognition System Using Improved Structural Features—A Unified Method for Handwritten Arabic and Persian Numerals. *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, 9(2-10), 33-40.

(Scopus Indexed Journal).

58. **Ghazanfar Latif**, Iskandar, D. A., Alghazo, J., Butt, M., & Khan, A. H. (2018). Deep CNN based MR Image Denoising for Tumor Segmentation using Watershed Transform. *International Journal of Engineering & Technology*, 7(2.3), 37-42.

(Scopus Indexed Journal).

- 2017** 59. Khan, Adil H., Jawad F. Al-Asad, and **Ghazanfar Latif**. "Speckle suppression in medical ultrasound images through Schur decomposition." *IET Image Processing* 12.3 (2017): 307-313.

(ISI Impact Factor: 2.004).

60. **Ghazanfar Latif**, Iskandar, D. A., Jaffar, A., & Butt, M. M. (2017). Multimodal Brain Tumor Segmentation using Neighboring Image Features. *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, 9(2-9), 37-42.

(Scopus Indexed Journal).

- 2012** 61. Jaffar, M. Arfan, Sultan Zia, **Ghazanfar Latif**, Anwar M. Mirza, Irfan Mehmood, Naveed Ejaz, and Sung Wook Baik, Anisotropic Diffusion based Brain MRI Segmentation and 3D Reconstruction, *International Journal of Computational Intelligence Systems*, Volume 5, Issue 3, 2012, pages 494-504.

(ISI Impact Factor: 1.89).**International Conference Publications****(Total Conference Papers: 33)**

- 2024** 62. **Ghazanfar Latif**, Brahim, G. B., Houda, T., & Alghazo, J. (2024, May). Date Fruit Classification Using Transfer Learning Techniques. In *2024 4th International Conference on Innovative Research in Applied Science, Engineering and Technology (IRASET)* (pp. 1-7). IEEE.

(IEEE, Scopus).

63. Latif, G., Mohammad, N., Brahim, G. B., Alghazo, J., & Fawagreh, K. (2024, May). Detection of AI-written and human-written text using deep recurrent neural networks. In *Fourth Symposium on Pattern Recognition and Applications (SPRA 2023)* (Vol. 13162, pp. 11-20). SPIE.
(SPIE, Scopus).
64. **Ghazanfar Latif**, Ghassen Bin Brahim, Nazeeruddin Mohammad, and Jaafar Alghazo. (2024, March). Combating medical image tampering using deep transfer learning. In *AIP Conference Proceedings* (Vol. 3034, No. 1).
(AIP, Scopus).
65. Akhtar Hussain, **Ghazanfar Latif**, Jaafar Alghazo and Eunjin Kim. (2024, March). Flood detection using deep learning methods from visual images. In *AIP Conference Proceedings* (Vol. 3034, No. 1).
(AIP, Scopus).
66. Maria Alabdulrahman, Lara Alotaibi, **Ghazanfar Latif**, Jaafar Alghazo and Ahmed Hasanaath, (2024). Arabic Offense Text Detection in Social Networks using Collaborative Machine Learning, *6th International Symposium on Advanced Electrical and Communication*, Khobar, Saudi Arabia.
(IEEE, Scopus).
- 2023 67. **Ghazanfar Latif**, N. Mohammad and J. Alghazo (2023). Plant Seedling Classification Using Preprocessed Deep CNN. *15th International Conference on Computer and Automation Engineering (ICCAE)*, Sydney, Australia, pp. 244-248.
(IEEE, Scopus).
- 2022 68. Ghadah Alhabib, **Ghazanfar Latif**, Jaafar Alghazo, Ghassen Ben Brahim, (2022, December). Seismic structures classification using novel features from seismic images. In *2022 14th International Conference on Computational Intelligence and Communication Networks (CICN)* (pp. 96-102).
(IEEE, Scopus).
69. David Feinauer, **Ghazanfar Latif**, Abeer M. Alenazy, Nizar Tayem, Jaafar Alghazo, Loay Alzubaidi, (2022, December). Oil spill identification using deep convolutional neural networks. In *2022 14th International Conference on Computational Intelligence and Communication Networks (CICN)* (pp. 240-245).
(IEEE, Scopus).
70. Suleiman Y Yerima, Abul Bashar, **Ghazanfar Latif**, (2022, December). Malicious pdf detection based on machine learning with enhanced feature set. In *2022 14th International Conference on Computational Intelligence and Communication Networks (CICN)* (pp. 486-491).
(IEEE, Scopus).
- 2021 71. **Ghazanfar Latif**; Faisal Anezi; M. Omair Butt; Jaafar Alghazo, Residual networks based classification of right whales in the ocean. In *3rd Smart Cities Symposium (SCS 2020)* (Vol. 2020, pp. 427-432).
(IET Inspec., Scopus).
72. Shahad Alghamdi, Mariam Alabkari, Fatima Aljishi, **Ghazanfar Latif**, Abul Bashar, (2021). Lung Cancer Detection from LDCT Images Using Deep Convolutional Neural Networks. In *International Conference on Communication, Computing and Electronics Systems: Proceedings of ICCCES 2020* (pp. 363-374).
(Springer, Scopus).
73. R. Al-Haddad; F. Sahwan; A. Aboalmakarem; **Ghazanfar Latif**; Yasmeen Alufaisan, Email text analysis for fraud detection through machine learning techniques. In *3rd Smart Cities Symposium (SCS 2020)* (Vol. 2020, pp. 613-616).
(IET Inspec., Scopus).
74. **Ghazanfar Latif**, Alghazo, J., Butt, M., & Kazimi, Z. A. (2021, June). Fast Parallel SVM based Arrhythmia Detection on Multiple GPU Clusters. In *2021 10th IEEE International Conference on Communication Systems and Network Technologies (CSNT)* (pp. 669-673). IEEE.
(IEEE, Scopus).
75. Saleh Al-Faraj, Mustafa Al-Bahrani, Saeed Al-Ghamdi, Marwan Rafie, Abul Bashar, **Ghazanfar Latif**, CNN-based Alphabet Identification and Sorting Robotic Arm, *International Conference on Communication, Computing and Electronics Systems (ICCCES 2020)*. Springer.

(Springer, Scopus).

76. Shurouq Alufaisan, Wafa Albur, Shaikha Alsedrah, and **Ghazanfar Latif**, (2021). Arabic Braille numeral recognition using convolutional neural networks. In *International Conference on Communication, Computing and Electronics Systems: Proceedings of ICCCES 2020* (pp. 87-101). Springer.

(Springer, Scopus)

- 2020 77. Alghazo, J., Bashar, A., **Ghazanfar Latif**, & Zikria, M. (2021, June). Maritime Ship Detection using Convolutional Neural Networks from Satellite Images. In *2021 10th IEEE International Conference on Communication Systems and Network Technologies (CSNT)* (pp. 432-437).
(IEEE, Scopus).
78. **Ghazanfar Latif**, Alsalem, B., Mubarky, W., Mohammad, N., & Alghazo, J. (2020, April). Automatic Fruits Calories Estimation through Convolutional Neural Networks. In *Proceedings of the 2020 6th International Conference on Computer and Technology Applications* (pp. 17-21).
(ACM, Scopus).
79. Mahmoud, A. A., Alawadh, I. N. A., **Ghazanfar Latif**, Alghazo, J. (2020, April). Smart Nursery for Smart Cities: Infant Sound Classification Based on Novel Features and Support Vector Classifier. In *2020 7th International Conference on Electrical and Electronics Engineering (ICEEE)* (pp. 47-52).
(IEEE, Scopus).
80. **Ghazanfar Latif**, Faisal Yousif Al Anezi, Mohammad Zikria, Jaafar Alghazo, EEG-ECG Signals Classification for Arrhythmia Detection using Decision Trees, *2020 Fourth International Conference on Inventive Systems and Control (ICISC)* (pp. 192-196).
(IEEE, Scopus).
81. **Ghazanfar Latif**, Muhammad O. Butt, Jaafar Alghazo, (2020, October). Ultrasound image despeckling and detection of breast cancer using deep CNN. In *2020 RIVF International Conference on Computing and Communication Technologies (RIVF)* (pp. 1-5).
(IEEE, Scopus).
- 2019 82. Sarwar M Haque, **Ghazanfar Latif**, Rafiul Hasan, Arifuzzaman, Shakib S Shafin, Quazi A Rahman, (2019, March). Scalable parallel SVM on cloud clusters for large datasets classification. In *2nd Smart Cities Symposium (SCS 2019)* (pp. 1-5).
(IET, Scopus).
83. Loay Alzubaidi, **Ghazanfar Latif**, Jaafar Alghazo, (2019). Affordable and portable realtime saudi license plate recognition using SoC. In *2019 2nd International Conference on new Trends in Computing Sciences (ICTCS)* (pp. 1-5).
(IEEE, Scopus).
84. Eman Shaikh, Iman Mohiuddin, Ayisha Manzoor, **Ghazanfar Latif**, Nazeeruddin Mohammad, (2019). Automated grading for handwritten answer sheets using convolutional neural networks. In *2019 2nd International conference on new trends in computing sciences (ICTCS)* (pp. 1-6).
(IEEE, Scopus).
- 2018 85. Adil H. Khan, **Ghazanfar Latif**, D.N.F. Awang Iskandar, Jaafar Alghazo, Mohsin Butt, Segmentation of Melanoma Skin Lesions using Anisotropic Diffusion and Adaptive Thresholding, *8th International Conference on Biomedical Engineering and Technology (ICBET 2018)*, *International Conference Proceedings Series by ACM* (ISBN: 978-1-4503-6369-3).
(ACM, Scopus)
86. **Ghazanfar Latif**, D.N.F. Awang Iskandar, Jaafar Alghazo, Multiclass Brain Tumor Classification using Region Growing based Tumor Segmentation and Ensemble Wavelet Features, *International Conference on Computing and Big Data (ICCBD 2018)*, *Charleston, South Carolina, USA* (ACM).
(ACM, Scopus).
87. **Ghazanfar Latif**, Jaafar Alghazo, Loay Alzubaidi, M. Muzzamal Naseer, Yazan Alghazo, Deep Convolutional Neural Network for Recognition of Unified Multi-Language Handwritten Numerals, *2nd IEEE*

Int. Workshop on Arabic and derived Script Analysis and Recognition (ASAR), March 12-14, 2018, The Alan Turing Institute, London, UK.

(IEEE, Scopus).

88. Maitham A Al-Dobais, **Ghazanfar Latif**, Fahad Abdulrahman G Alrasheed, Loay Alzubaidi, Adoptive Thresholding and Geometric Features based Physical Layout Analysis of Scanned Arabic Books, *2nd IEEE Int. Workshop on Arabic and derived Script Analysis and Recognition (ASAR), March 12-14, 2018, The Alan Turing Institute, London, UK.*

(IEEE, Scopus).

- 2017** 89. **Ghazanfar Latif**, M. Mohsin Butt, Adil H. Khan, Omair Butt, and DNF Awang Iskandar. "Multiclass brain Glioma tumor classification using block-based 3D Wavelet features of MR images." In *4th International Conference on Electrical and Electronic Engineering (ICEEE)*, pp. 333-337, Ankara Turkey, IEEE.

(IEEE, Scopus).

90. Jaffar Alghazo, Zafar Kazmi, **Ghazanfar Latif**, Cyber Security Analysis of Internet Banking in Emerging Countries: User and Bank Perspectives, *4th IEEE International Conference on Engineering Technologies and Applied Sciences (ICETAS)*.

(IEEE, Scopus).

91. **Ghazanfar Latif**, M. Mohsin Butt, Adil H. Khan, M. Omair Butt, Jawad F. Al-Asad, Automatic Multimodal Brain Image Classification using MLP and 3D Glioma Tumor Reconstruction, *9th IEEE-GCC Conference and Exhibition (IEEE-GCC)*, Manama Bahrain.

(IEEE, Scopus).

92. **Ghazanfar Latif**, Adil H. Khan, M. Mohsin Butt, Omair Butt, IoT based Real-time Voice Analysis and Smart Monitoring System for Disabled People, *International Conference on Advanced Research (ICAR- 2017)*, Manama Bahrain, pp. 191-199.

93. Jaafar M. Alghazo, Faisal Yousif Al Anezi, **Ghazanfar Latif**, Mohammad Mohsin Butt, Sustainable Economic Development through IT Workforce in Saudi Arabia, *2nd International Conference on Emerging Research for Sustainable Economic Development (2nd ERSED-2017)*, Manama Bahrain.

- 2013** 94. **Ghazanfar Latif**, Muhammad Mohsin Butt, and Adil Humayun Khan, Eye Click: Eye Gaze based User Interface for the Disabled People, *International Conference on Technology for Helping People with Special Needs (ICTHP-2013)*, Saudi Arabia.

- 2010** 95. Qurat-Ul-Ain, **Ghazanfar Latif**, Sidra Batool Kazmi, M. Arfan Jaffar, and Anwar M. Mirza, Classification and Segmentation of Brain Tumor using Texture Analysis, in *International Conference on Artificial Intelligence, Knowledge Engineering and Databases (AIKED 2010)*, University of Cambridge UK Pages: 147-155.

Book Chapters

(Total Published Chapters: 7)

- 2023** 96. **Ghazanfar Latif**, Jaafar Alghazo, and Zafar Kazmi (2023), Security Enabling for IoT and Wireless Sensor Networks based Data Communication, *Advanced Wireless Communication and Sensor Networks: Applications and Simulations*, Taylor & Francis.

(Taylor & Francis, Scopus).

97. **Ghazanfar Latif**, Jaafar Alghazo, and Sherif E. Abdelhamid (2022), Social Impacts of Technology with the Emergence of IoT, 5G and Artificial Intelligence, *Advanced Wireless Communication and Sensor Networks: Applications and Simulations*, Taylor & Francis.

(Taylor & Francis, Scopus).

- 2020** 98. **Ghazanfar Latif**, Alghazo, J. M., Maheswar, R., Sampathkumar, A., & Sountharajan, S. (2020). IoT in the Field of the Future Digital Oil Fields and Smart Wells. In *Internet of Things in Smart Technologies for Sustainable Urban Development* (pp. 1-17). Springer, Cham.

(Springer, Scopus).

99. **Ghazanfar Latif**, Alghazo, J. M., Maheswar, R., Jayarajan, P., & Sampathkumar, A. (2020). Internet of Things: Reformation of Garment Stores and Retail Shop Business Process. In *Integration of WSN and IoT for Smart Cities* (pp. 115-128). Springer, Cham.

(Springer, Scopus).

100. **Ghazanfar Latif**, Alghazo, J. M., Maheswar, R., Jayarajan, P., & Sampathkumar, A. (2020). Impact of IoT-Based Smart Cities on Human Daily Life. In *Integration of WSN and IoT for Smart Cities* (pp. 103-114). Springer, Cham.

(Springer, Scopus).

101. Debnath, Biswajit, Jaafar M. Alghazo, **Ghazanfar Latif**, Reshma Roychoudhuri, and Sadhan Kumar Ghosh. "An Analysis of Data Security and Potential Threat from IT Assets for Middle Card Players, Institutions and Individuals." In *Sustainable Waste Management: Policies and Case Studies*, pp. 403-419. Springer, Singapore, 2020.

(Springer, Scopus).

- 2019** 102. **Ghazanfar Latif**, Jaafar Alghazo, (2019), IoT based Cloud based Rx Healthcare Expert System, Fog Computing for Healthcare 4.0 Environments: Technical, Societal, and Future Implications, Springer.

(Springer, Scopus).**Research Poster Presentations****(Total Posters: 5)**

- 2023** 103. **Ghazanfar Latif**, Khalid Alnujaidi, Ghadah Alhabib, Innovative Education System for the Blind: AI based Arabic Braille Language System, *Technology in the Service of People, NEOM Oxagon Hackathon, 2022*, Riyadh, Saudi Arabia.

- 2020** 104. Wafa Albur, Shorouq Alufaisan, Shaikha Alsedrah, **Ghazanfar Latif**, Arabic Braille Words Recognition using Deep Learning Techniques, *2020 PMU International Conference on Industrial Revolution 4.0 in Computing, Mobility, and Manufacturing (CMM 2020)*, Khobar, Saudi Arabia.

- 2019** 105. Shahad Abdullah Alghamdi, Lama Adel Boubshait, Reem Ali Alsadiq, **Ghazanfar Latif**, Jaafar Alghazo, Arabic Handwritten Word Recognition using Deep Convolutional Neural Networks, *IEEE International Conference on Imaging Systems & Techniques (IST)*, 2019, Abu Dhabi, UAE.

106. Nouf Aljasim, Ayat Alali, Zahra Alhamad, **Ghazanfar Latif**, Jaafar Alghazo, Detection of defects in Oil-Pipes using Autonomous Robots through Image Analysis, *IEEE International Conference on Imaging Systems & Techniques (IST)*, 2019, Abu Dhabi, UAE.

- 2018** 107. **Ghazanfar Latif**, Dayang Nurfatimah, Automated Brain Tumor Detection, Analysis, and Visualization System, *Innovation & Technology Exposition (InTEX18)*, Kuching, Malaysia, 2018.

INDUSTRY FREELANCE PROJECTS (OUTSOURCED)

Infrastructure / AI/ML/ Cloud Computing / Big Data

(Sept. 2011 – Jan. 2022)

Number of Projects/Jobs Completed: **150+**
 Total Earning: **150,000+ USD**
 Number of work hours: **3000+**
 Clients Review Score: **4.51/5 (www.upwork.com)**

| # | Project Title | Project Duration | Country |
|----|---|-----------------------------|--------------|
| 1 | AI Transfer Learning: Peptides identification from proteins data – DeepDIA project | Sep 10, 2021 - Nov 03, 2021 | Germany |
| 2 | Machine Learning Engineer (Natural Language Processing for Medical Data – Drug Discovery) | Jun 18, 2021 – Oct 26, 2021 | USA |
| 3 | Deep Learning and Image Processing for Tooth Diseases | Aug 23, 2021 - Oct 01, 2021 | Japan |
| 4 | LSTM Deep/Machine Learning Project Tone Up | Jul 23, 2021 – Aug 2, 2021 | USA |
| 5 | Feature Extraction (NLP) using Python | Jun 24, 2021 - Jun 28, 2021 | Greece |
| 6 | CNN, Tensorflow and Colab | Jul 4, 2021 – Jul 27, 2021 | Australia |
| 7 | Design a Variational-Convolutional Autoencoder | Jun 15, 2021 – Jun 21, 2021 | USA |
| 8 | MATLAB Expert for Streaming Data | Jun 27, 2021 – Jul 2, 2021 | Saudi Arabia |
| 9 | Computer Vision Expert | Jun 12, 2021 - Jun 17, 2021 | Canada |
| 10 | Build an API for Handwritten Characters Recognition | July 19, 2021 – Oct 8, 2021 | USA |
| 11 | Valeriy Rasskazov / Amazon AWS Monitoring software | Sep 09, 2013 – Mar., 2014 | Australia |
| 12 | Ambient BP / Incorporating 26 video files into website in the most efficient way. | Aug 23, 2013 - Mar, 2014 | USA |
| 13 | Coresoft / Amazon AWS Systems Specialist | Aug 08, 2013 - Mar, 2014 | Singapore |
| 14 | tekcp / Site Disaster recovery to the Cloud | Aug 08, 2013 - Mar, 2014 | Canada |
| 15 | Josh Lindsteadt / Need Web Developer to build SaaS website | Jul 31, 2013 - Mar, 2014 | USA |
| 16 | Katy Computer Specialists / PHP Developer | Jul 02, 2013 - Jan, 2014 | USA |
| 17 | Portoformia / Cloud architecture designer | Jun 24, 2013 - Jan, 2014 | USA |
| 18 | Speaktopic ApS / Design of architechure for Amazon Cloud website | Jun 19, 2013 – Jan, 2014 | Denmark |
| 19 | Phoner / AWS SES Tech | Jun 14, 2013 - Dec, 2013 | USA |
| 20 | DataZoo Media / Amazon Elastic Transcoder | May 15, 2013 - Dec, 2013 | Canada |
| 21 | medical ent / Software Design and Development | Apr 12, 2013 – Dec, 2013 | USA |
| 22 | MediaLeaf Technologies, Inc. / Need Help Writing Amazon S3 Bucket Access Policy | Aug 16, 2013 - Sep 10, 2013 | Australia |
| 23 | Bawn Media Networks, Inc / Video Streaming Platform Development | Aug 02, 2013 - Sep 02, 2013 | USA |
| 24 | Media Perfection / JW Player Expert | Aug 01, 2013 - Aug 04, 2013 | USA |
| 25 | songphon phapatha / AWS Setup | May 01, 2013 - May 11, 2013 | Thailand |
| 26 | SensibleS (1) / ec2 | Feb 12, 2012 - Jan 25, 2013 | USA |
| 27 | Techsided Solutions / Cloud Architect | Jan 21, 2012 - Jul 06, 2012 | USA |
| 28 | JeFrench / Ezs3 Expert | Apr 17, 2012 - Jun 16, 2012 | USA |

| | | | |
|----|---|-----------------------------|--------------|
| 29 | GRR Systems, Inc. / EC2 Consultant | Mar 26, 2012 - May 03, 2012 | Canada |
| 30 | Local Advertising 411 / Amazon S3 content | Jan 20, 2012 - Apr 24, 2012 | USA |
| 31 | GOCHIPI / Expert | Oct 12, 2011 - Apr 13, 2012 | USA |
| 32 | N/A / AWS designer | Oct 25, 2011 - Feb 20, 2012 | USA |
| 33 | Helpmewithdotnet / ASP.NET Web Developer | Oct 29, 2011 - Feb 17, 2012 | Canada |
| 34 | hsouza / Cloud Computing Architect | Oct 22, 2011 - Feb 13, 2012 | USA |
| 35 | Diasol AB / Amazon EC2 | Nov 03, 2011 - Feb 07, 2012 | Sweden |
| 36 | tg2000 / Video pages | Feb 03, 2012 - Feb 06, 2012 | Cyprus |
| 37 | ADIL / Amazon ec2 expert | Jan 24, 2012 - Jan 26, 2012 | Saudi Arabia |
| 38 | Robert G. / Amazon API Developer | Dec 19, 2011 - Dec 28, 2011 | Canada |
| 39 | Bonnell Street Enterprises, Inc. / AWS Guru | Nov 14, 2011 - Dec 05, 2011 | USA |
| 40 | New World Media Irl / AWS Module 3&4 | Oct 11, 2011 - Nov 29, 2011 | Ireland |
| 41 | RevUp Render, Inc. / EC2 Expert | Oct 27, 2011 - Nov 26, 2011 | USA |
| 42 | GSG Networks Pte. Ltd. › movies / Flash Video Player | Nov 18, 2011 - Nov 22, 2011 | Singapore |
| 43 | Push 3 Marketing / amazon S3 and CloudFront configuration | Nov 05, 2011 - Nov 06, 2011 | USA |
| 44 | Helpmewithdotnet / AWS EC2 VPC Configuration Assistance | Oct 20, 2011 - Oct 27, 2011 | Canada |
| 45 | internetdata / Senior Amazon AWS / ECS Server Administrator | Oct 12, 2011 - Oct 27, 2011 | USA |
| 46 | internetdata / server work | Oct 10, 2011 - Oct 11, 2011 | USA |
| 47 | New World Media Irl / AWS | Oct 04, 2011 - Oct 10, 2011 | Ireland |
| 48 | ZoomRadar / Image Manipulation Specialist | Aug 18, 2011 - Oct 04, 2011 | USA |
| 49 | New World Media Irl / AWS Scripting | Sep 16, 2011 - Oct 03, 2011 | Ireland |
| 50 | Filmhauer / Expert: Migrate from Shared Web to Amazon EC2 | Aug 31, 2011 - Sep 14, 2011 | Spain |

REFERENCES

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