

Nadeem Ghafoor

Date of birth: 19/01/2001 | **Place of birth:** Lasbela, Pakistan | **Nationality:** Pakistani | **Gender:** Male | **Phone number:** (+86) 15680139069 (Mobile) | **Phone number:** (+92) 3472664991 (Home) | **Email address:** nadeemghafoor650@gmail.com | **Email address:** nadeem@mails.swust.edu.cn | **WeChat:** ng_29071998 | **Whatsapp Messenger:** +923472664991 |

Address: Agriculture colony near DC house, 90150, Uthal, Pakistan (Home)

ABOUT ME

I am a Software Engineering postgraduate with strong expertise in machine learning, data analysis, and visualization. Skilled in applying computational methods to extract insights from complex datasets, I focus on building scalable and interpretable data-driven solutions that improve efficiency and support decision-making. I bring a commitment to innovation, problem-solving, and continuous professional growth.

RESEARCH INTEREST

Research Direction

1. Machine learning
2. Data Visualization & Analysis
3. Visual Analysis
4. Cybersecurity
5. Smart systems, and intelligent decision support

Smart Systems Systems that use AI/ML to adapt, learn, and respond intelligently to data or environments. Examples: smart grids, smart homes, autonomous systems, IoT-based intelligent platforms.

Intelligent Decision Support Computer systems designed to help humans make better decisions by analyzing large datasets, finding patterns, and presenting results in a clear way. Example: a system that visualizes ML model predictions to assist doctors, engineers, or policymakers.

PROJECTS

Smart AI Home and Personal Assistant

1. Designed and developed a touch-enabled smart mirror with Raspberry Pi and Python, integrating a personal voice assistant for home automation and daily assistance.
2. Implemented speech recognition, natural language processing, and IoT device control to enable both voice-based and touch interactions for managing appliances, reminders, and information retrieval.
3. Demonstrated strong skills in embedded systems, Python programming, IoT integration, and human-computer interaction, showcasing the potential of low-cost hardware for smart home solutions.

Understand Tree-Based Machine Learning Models on Tabular Data Via Visualization & Visual Analytics

1. **Designed and built a visual analytics framework for XGBoost**
Use XGBoost created a full system that makes its internal decision-making understandable through visualization, solving the black-box problem.
2. **Developed an interactive web-based dashboard (React.js + FastAPI)**
Implemented a complete pipeline: backend for model training/evaluation and frontend for real-time visualization and interaction not just theory, actual system engineering.
3. **Integrated multiple interpretability techniques into one unified system**
Instead of relying on a single method (like SHAP), you combined feature importance, confusion matrix, decision paths, K-Fold validation, and hyperparameter visualization in one place.
4. **Enabled real-time exploration of model behavior and hyperparameters**
System allows users to dynamically analyze how parameter tuning affects performance and decision boundaries this is a step beyond static XAI tools.
5. **Validated the framework using real-world case studies (healthcare + cybersecurity)**
Proved our system isn't theoretical by applying it to diabetes prediction and phishing detection, showing interpretability across different domains.

PUBLICATIONS

2024
A Deep Reinforcement Learning Framework for Detecting Fraudulent Bank Account Openings

Authors: Qayoom, Abdul, Wu Yadong, Wang Song, Sammar Abbas, and Nadeem Ghafoor | **Journal Name**: Sir Syed University Research Journal of Engineering & Technology (SSURJET) | **Volume, Issue and Pages**: 14(2), 85–92 | **Publisher**: Sir Syed University Research Journal of Engineering & Technology

2025
Machine learning for Smarter Industrial Wastewater Treatment:Innovations and Insights

Authors: Ayesha Asghar, Burhan Khalid, Nadeem Ghafoor, Muhammad Ikram, Muhammad Atiq Ashraf, Nazma Khan, Musrat Shaheen, Jakkampudi Sowjanya, Hafsa Fatima, Muhammad Mohsin MumtazandTalha Riaz | **Journal Name**: NATURE'S SYMPHONY | **Volume, Issue and Pages**: Vol. 3 No. 2 (2025): Nature's Symphony - Volume 3, Issue 2 | **Publisher**: NATURE'S SYMPHONY

EDUCATION AND TRAINING

05/03/2024 – 12/12/2025 Mianyang, China
MS SOFTWARE ENGINEERING Southwest University of Science and Technology

1. Software Architecture
2. Software Quality Assurance
3. Fundamentals of Computer Science and Mathematics
4. Data Visualization
5. AI & KE
6. Cloud Computing and Computer system Architecture

Website https://www.swust.edu.cn

12/2018 – 03/2023 Uthal, Pakistan
BS COMPUTER SCIENCE Lasbela University of Agriculture Water and Marine Sciences

Website https://www.luawms.edu.pk/ | **Final grade** 3.74/4.00 | **Thesis** Smart AI Home and Personal Assistant

WORK EXPERIENCE

COMPUTER SCIENCE LECTURER – LASBELA UNIVERSITY OF AGRICULTURE WATER AND MARINE SCIENCES – 13/01/2026 – Current – UTHAL, PAKISTAN

1. Database System DBMS
2. Web Engineering
3. Interoduction to Computer
4. Aplications of ICT

IT EXPERT – LUAWMS INCUBATION CENTER – NATIONAL EXPANSION PLAN – 10/02/2022 – 09/08/2022 – UTHAL, PAKISTAN

Handel Website Activities and Social Media Platforms

SKILLS

Python | JavaScript | Bootstrap CSS | React-JS | Git & Githubs | Data Gathering / Data Processing / Data Visualization / Data Analysis | Kali Linux | Web Design & Web Development | Firebase: Firestore, FirebaseAuth, Firestorage, RealTime database | SQL

COURSES

16/03/2022
PCAP: Programming Essentials in Python

24/05/2023
Cisco Networking Academy (NDG Linux Essentials)

03/08/2023
(Upskill with Eduonix) Learn JavaScript By Building a Simple Quiz

03/08/2023
(Upskill with Eduonix) Advance JavaScript for Coders Learn OOP in JavaScript

HONOURS AND AWARDS

Balochistan Education Endowment Fund (BEEF) Scholarship – Govt. of Balochistan (Pakistan)

Four Time winner in every year of BS study

Southwest University OF Science and Technology Scholarship – Southwest University OF Science and Technology

LANGUAGE SKILLS

Mother tongue(s): **URDU | SINDHI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

RECOMMENDATIONS

Wang Song Associate Professor

1. Mr. Ghafoor has been actively involved in research initiatives related to **machine learning, deep learning, computer vision, and intelligent systems**, showcasing excellent technical abilities and a strong command of theoretical and practical concepts. His capability to grasp advanced topics and contribute meaningfully to discussions speaks highly of his academic maturity.
2. In addition to his academic strengths, Mr. Ghafoor maintains a professional attitude, strong communication skills, and a positive presence in collaborative environments. His fluency in English and ability to present technical ideas clearly make him an impressive and effective communicator.

Email wangsong@swust.edu.cn | **Phone** (+86) 15892620914

Yin Long Associate Professor

1. He has contributed to several research-oriented projects with creativity and diligence. His ability to analyze data, build intelligent models, and interpret results meaningfully highlights his research capability. Mr. Ghafoor approaches challenges with a positive mindset and demonstrates resilience, strong reasoning skills, and innovative thinking.
2. Beyond academics, Mr. Ghafoor is a disciplined and respectful individual who communicates well and maintains a collaborative spirit. His participation in academic discussions, seminars, and cross-cultural events reflects his enthusiasm for learning and engagement with the university community.

Email yinnuoloong@163.com | **Phone** (+86) 18281602422

Dr. Nadeem Nawaz Dean of faculty of Engineering science and technology

1. The illustrious qualities which have conscientious impressed me include his critical thinking, sharp to learn and acquire new things. He is one of the most hardworking, brilliant and promising student I have come across.
2. His ability to analyze a problem and to abstract a situation needs a special mention. Apart from being technically sound, he has shown a preference for grasping and visualizing practical hurdles he proved to be a potential research student.

Email dean.wrm@luawms.edu.pk | **Phone** (+92) 3423042377

Dr. Shafiq Ur Rehman Assistant Professor (HOD)

1. During my 4 years of acquaintance with Mr. Nadeem Ghafoor in the department, the distinguished qualities which have meticulously impressed me includes his sharp thinking, eagerness to learn and grasp new things. He is one of the most endowed, brilliant and promising student I have come across.
2. Mr. Nadeem Ghafoor exhibits a number of good characteristics such as independent and excellent participation in class with outstanding communication and presentation skills. Being a multi talented student, his ability to work under esteemed eager is admiring. I have always found him respectful towards his teachers which I believe is a remarkable personality trait.

Email shafiq@luawms.edu.pk | **Phone** (+92) 3335583846