



FRAZ YOUSAF

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Date of birth: 07/12/1995 **Place of birth:** Multan, Pakistan **Gender:** Male

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ABOUT ME

I'm someone who loves learning new things and solving problems. Whether it's teaching, managing projects, or working as a freelancer, I bring dedication and creativity to everything I do. I enjoy working with others and am always eager to explore new ideas and technologies. My goal is to keep growing and making a positive impact in the world of computer science.

WORK EXPERIENCE

University of Parma, Italy – Parma, Italy

City: Parma | Country: Italy

PHD Scholar

[01/03/2025 – Current]

As a PhD scholar in Computer Science specializing in IoT security and intelligent communication systems, I am developing secure, scalable architectures for MQTT and MQTT-SN-based networks. My research focuses on lightweight encryption models, group key distribution, and efficient message routing for low-power IoT devices. I have implemented several working prototypes, including secure MQTT/MQTT-SN frameworks, Arduino-based IoT clients, and a Group Key Distribution Center (GKDC) with AES encryption, all contributing toward a robust foundation for secure Internet of Bio-Nano Things (IoBNT) systems.

FAST National University of Computer and Emerging Sciences, Lahore Campus – Lahore, Pakistan

City: Lahore | Country: Pakistan | Website: <https://lhr.nu.edu.pk/> | Email address: fraz.yousaf@nu.edu.pk | Name of unit or department: Computer Science - Business or sector: Education

Senior lecturer in computer science

[01/07/2022 – 12/02/2025]

As a Lecturer at FAST National University of Computer and Emerging Sciences, I designed and delivered undergraduate courses, lectures, and tutorials in Computer Science while supervising multiple Final Year Projects across domains such as IoT, security, healthcare, computer vision, and sign language recognition. I guided students in developing innovative solutions, including projects like *Muhafiz*, *Sign Language Translator*, *Automatic Acne Detection*, and *Brand Monitoring using AI*. Several project demonstrations are showcased on my YouTube channel: [@FrazYousaf-m2g](https://www.youtube.com/@FrazYousaf-m2g).

 **FAST National University of Computer and Emerging Sciences, Lahore Campus** – Lahore, Pakistan

City: Lahore | Country: Pakistan | Website: <https://lhr.nu.edu.pk/> | Email address: fraz.yousaf@lhr.nu.edu.pk |

Name of unit or department: Computer Science - Business or sector: Education

Lab Instructor/Teacher Assistant

[08/04/2020 – 16/06/2022]

-Work with faculty and course Instructor to develop lab materials for students and provide timely feedback to Course Instructor. Supervise students in a professional manner and grade lab assignments

-Provide support to a lead teacher in charge of a classroom, help students who need extra support to complete task. Maintain student record check assignment and quizzes.

 **AM-TECK Software Solutions** – Multan, Pakistan

City: Multan | Country: Pakistan

Projects manager

[03/09/2018 – 30/08/2019]

My responsibility was to plan, organize, and direct the completion of specific projects for an organization while ensuring these projects were on time, on budget, and within scope.

 **Fiverr**

Website: [fiverr.com](https://www.fiverr.com) | Name of unit or department: freelancing - Business or sector: Other service activities

Freelancer

[05/09/2019 – 16/01/2022]

In freelancing, I was working on Android Applications, WordPress Websites, Landing pages and Gif animations. And in this time period, I have completed more than 300 different projects with different clients.

 **Wiley**

Website: <https://www.wiley.com/en-us> | Email address: farazfiaz022@gmail.com | Name of unit or department: General Paper Reviewer - Business or sector: Information and communication

Research Paper Reviewer

[13/07/2023 – Current]

Wiley is an American multinational publishing company that focuses on academic publishing and instructional materials.

EDUCATION AND TRAINING

Doctor of Philosophy in IoT Security

University of Parma, Italy [01/03/2025 – Current]

City: Parma | Country: Italy | Website: <https://www.unipr.it/en> | Level in EQF: EQF level 8

Master in Computer Science

FAST National University of Computer and Emerging Sciences, Lahore Campus [15/08/2019 – 09/03/2022]

City: Lahore | Country: Pakistan | Website: <https://lhr.nu.edu.pk/> | Field(s) of study: Computer Science | Final grade: 3.60 | Level in EQF: EQF level 7 | Thesis: Securing Bio-FET Interfaces in IoBNT Systems using Deep Learning Techniques (<https://ieeexplore.ieee.org/document/10414198>)

Machine Learning

Natural language processing (NLP)

Applied Programming

Advanced Theory of Automata

Advanced Analysis of Algorithm

Bachelor's in Information Technology

Bahauddin, Zakariya University Multan, Pakistan [06/05/2014 – 12/09/2018]

City: Multan | Country: Pakistan | Website: <https://bzu.edu.pk/> | Field(s) of study: Information Technology | Final grade: 3.76 (Gold Medalist) | Level in EQF: EQF level 6 | Thesis: An Android mobile device, coupled with an administrative panel, serves as a platform offering various services.

-Programming Fundamental
-Software Design
-Database
-Networking
-Algorithms

LANGUAGE SKILLS

Mother tongue(s): Urdu

Other language(s):

English

LISTENING C2 READING C2 WRITING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

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

SKILLS

Programming Languages: Java, C, Kotlin, C#, C++, LINQ / Adobe Photoshop (Expert) / Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access / Open source internet research / supervisory skills / Effective teaching techniques / Leadership, Critical thinking and Emotional Intelligence / project manager / Docker and kubernetes / Ubuntu

PUBLICATIONS

[2023]

Securing Bio-FET Interfaces in IoBNT Systems using Deep Learning Techniques Several recent studies to address security vulnerabilities of Internet of Bio-Nano Things (IoBNT) are underway to streamline its wider adoption in e-healthcare. IoBNT systems comprise of in-vivo nano-networks connected to external networks through bio-cyber interfacing for remote drug delivery and healthcare management. Biofield-effect transistors (BioFET) based interfaces have shown promising results in realizing practical IoBNT implementation. BioFETs offer an economical and scalable solution to connect molecular in-body drug delivery networks, actuated by external monitoring stations. Ensuring BioFET operational safety against cyber threats is vital to increasing patient confidence and complying with strict data protection and security governance required by e-healthcare providers. The present work utilizes deep learning technology to classify biochemical signals originating from BioFET sensors, discriminating between normal and anomalous behaviour. During validation several individual and ensemble DL structures are applied on synthesized dataset to determine optimal anomaly classifier. The results demonstrate that a hybrid convolutional and longshort term network ensemble offers relatively high efficiency (92%) and lower latency in comparison with other DL models.

T. Bakhshi and F. Yousaf, 2023 17th International Conference (ICOSST), Lahore, Pakistan,

RECOMMENDATIONS

Name: **Dr.Taimur Bakhshi** | Supervisor

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Email: t.bakhshi@ieee.org

Name: **Dr.Aamir wali** | University Professor

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Email: aamir.wali@nu.edu.pk | Phone number: (+92) 42111128128

Name: **Mr. Hamad Ul Qudous [PhD Scholar]** | Principal Lecturer Artificial Intelligence & Data Science Department,

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Email: hamad.ulqudous@nu.edu.pk | Phone number: (+92) 3365922132

DRIVING LICENCE

Driving Licence: A2

Driving Licence: B

13/01/2025 – 13/01/2027

AWARDS AND CERTIFICATES

[08/06/2022 – Current]

Co-Advisor at Softec

Serving as a co-advisor at the Softec Society of FAST National University of Computer and Emerging Sciences in Pakistan.

Certification

-Cisco Certification.

-C Language Course Certificate from Aptech Education, Multan Campus.

-Logo designing participant in the "OVERCLOCKED" event, held on January 11, 2016, at the Information Technology Department, BAHAUDDIN ZAKARIYA UNIVERSITY Multan Pakistan

-Attendee at FreeCom - Freelancing Convention presented by One-Step Corporation Pakistan on September 19, 2017, at Raza Hall, Multan, Pakistan.

-Participant in Spring Festival (Technology & Agricultural Innovation (TAI)-2018) showcasing "Software Exhibition" at Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan.

-Attendee at Cyber Security Conferences at Bahauddin Zakariya University, Multan, Pakistan.in Cyber Security Conferences at BAHAUDDIN ZAKARIYA UNIVERSITY Multan Pakistan

PISA SUMMER SCHOOL

[17/07/2025 – 24/07/2025]

Enabling Technologies for Industrial Internet of Things

Attended the course “**Enabling Technologies for Industrial Internet of Things**” held at University of Pisa,

Department of Information Engineering, with 50 hours of front lessons from **17 to 24 July 2025**, and with

remote project work starting from 25 July 2025, according to the program scheduling available at the link below

Link: <https://www.unipi.it/didattica/corsi/summer-schools/enabling-technologies-for-industrial-internet-of-thing>