



Muhammad Bin Saif

Date of birth: 01/08/1996 | **Nationality:** Pakistani | **Gender:** Male |

(+92) 3022228368 | personal@muhammadbinsaif.com |

<https://muhammadbinsaif.com/> |

<https://www.linkedin.com/in/muhammad-bin-saif-a04870137/> |

Skype: <https://join.skype.com/invite/dZFHR6qtMbd7> | Islamabad, Pakistan

About me:

As a graduate research assistant and software developer, I am proficient in programming and design algorithms as well as research, analysis and conducting experiments in all major programming languages. Currently, I am pursuing a master's degree (final semester) in Computer Application Technology to advance research into ad hoc networks (FANET, VANET), Edge Computing, Blockchain, Artificial Intelligence and Network Security. I have diverse background and skills in software development (C#, ASP.NET, Javascript), blockchain development (Solidity, certified blockchain developer), network simulation design and implementation (C++, Python, MATLAB, NS3), manuscript management (latex, research writing, revisions handling) and English proficiency (IELTS 7.0 overall).

● EDUCATION AND TRAINING

24/09/2019 – CURRENT – Shenyang , China

MASTER OF ENGINEERING (COMPUTER APPLICATION TECHNOLOGY) – Shenyang Aerospace University

- Working under the supervisor of Liang Zhao (lzhao@sau.edu.cn).
- Scored 81% (6.08/10.00 CGPA) grades in 5 semesters and now preparing for the final defense.
- Expected to be graduate in July 2022.
- Major research in ad hoc networks, wireless sensors networks, Blockchain, and Artificial Intelligence.
- Currently, doing research on Flying Ad hoc Networks (FANET), Mobile Edge Computing (MEC), and wireless network security using Artificial Intelligence(AI).
- Developed a lightweight blockchain architecture for the Internet of Things (IoT).

Field(s) of study

- Information and Communication Technologies

Thesis: A Study of Secure and Intelligent Routing Scheme for Flying Vehicles

81% | <https://en.sau.edu.cn/>

01/10/2013 – 07/10/2017 – Rawalpindi , Pakistan

BACHELORS OF SCIENCE (COMPUTER SCIENCE) – PMAS Arid Agriculture University

The final year project was an Ecom solution with text mining on customers reviews developed in ASP.NET MVC and among the selected best projects in the Open House job fair. Secured 61.28% (2.68/3.00 CGPA) grades.

Thesis: Product Review Web Application

61.28% | <https://www.uaar.edu.pk/index.php>

● WORK EXPERIENCE

19/09/2019 – CURRENT – Shenyang, China

GRADUATE RESEARCHER – LAB OF NETWORK COMMUNICATION, SHENYANG AEROSPACE UNIVERSITY

- Working in the Lab of Network Communication under the supervision of Dr. Liang Zhao (lzhao@sau.edu.cn).

- Conduct experiments on network simulators (NS3, NS2) for FANET and VANET to optimize the results.
- Design and develop Artificial Intelligence algorithms for optimization.
- Develop distributed blockchain-based proof-of-concept prototypes for Adhoc Networks.
- Designed and developed a lightweight consensus algorithm for resource-constrained IoT devices.
- Successfully implemented AI for energy-efficient blockchain for IoT.

<https://en.sau.edu.cn/>

20/06/2021 – 01/09/2021 – Islamabad, Pakistan

TEMPORARY RESEARCH ASSISTANT – NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY (NUST)

- It was a project-based unpaid job in collaboration with Shenyang Aerospace University and the National University of Science and Technology.
- Conducted experiments on network simulators (NS3, NS2, MATLAB), developed blockchain-based solutions and compared the performance of various wireless routing algorithms for Flying Adhoc Networks (FANET).
- Developed reinforcement learning-based optimization and security solution for edge computing.

<http://seecsnuust.seecs.edu.pk/faculty/rizwan.html>

10/11/2020 – 15/05/2021 – Islamabad, Pakistan

TECHNICAL PROJECT ASSISTANT – VISION BOTIX

- Analyze, plan and develop requirements and standards of the project on advanced technologies (Smart Farm).
- Analyze the strengths, weaknesses, and risks of existing projects and recommend improvements (ASP.NET Core, Angular).
- Worked closely with the Team Lead to determine and define deliverables, roles, and responsibilities for staff members required for specific projects.

<https://visionbotix.com/>

<https://youtu.be/1AGplQwqwLo>

01/07/2018 – 01/06/2019 – Istanbul, Turkey

REMOTE WEB DEVELOPER – SISTEMBUL.COM

- Worked as a remote individual full-stack web developer.
- Designed, developed, and revamped websites using ASP.NET MVC, jQuery, HTML, CSS, SQL, Payment Gateway and Angular Ant Design.
- Investigated errors to reproduce issues and develop software fixes in ASP.NET MVC.
- Analyzed software usability and performance, recommend changes to improve functionality.

iletisim@sistembul.com | <https://www.sistembul.com/>

01/03/2016 – 01/03/2018 – Rawalpindi, Pakistan

SOFTWARE ENGINEER – GROUPER LOGIC

- Versed in the complete software life cycle from preliminary needs analysis to enterprise-wide deployment and support.
- Involved in all aspects of the ALM (application life cycle management).
- Performed testing, troubleshooting and debugging mainly in ASP.NET MVC and Core for a fast-paced software development firm.
- Developed, maintain and monitored websites using ASP.NET MVC, Jquery, HTML, CSS and SQL.
- Developed coding standards, Software Designs and Architecture Patterns for projects. Design system architecture for the migration project.
- Analyzed the development process and made recommendations for streamlining and alternative approaches.

info@grouperlogic.com

● DIGITAL SKILLS

Hard Skills

Blockchain | C, C++, C# | Smart Contracts | Manuscript Writing | Ethereum and Solidity | Git | ERC 20 | Python | Network Simulator 3 | DApps | Artificial Intelligence | Docker | Web Development: HTML 5, CSS, JavaScript | MATLAB&Simulink | Asp.net MVC, Core | SQL, Database Design, Normalization, Query Optimization | Linux | Document preparation system LaTeX | Machine Learning | Software Design and Architecture Patterns

Soft Skills

Research Report Writing | Problem Solving | Experiment Design | Team Management & Team Work | Research Reporting | Communication and Presentation | Literature Reviews | Independent Research skills

● PUBLICATIONS

A Novel Artificial Bee Colony and Blockchain-Based Secure Clustering Routing Scheme for FANET

<https://ieeexplore.ieee.org/document/9495358/> - 2021

Flying Ad hoc Network (FANET) has drawn significant consideration due to its rapid advancements and extensive use in civil applications. However, the characteristics of FANET including high mobility, limited resources, and distributed nature, have posed a new challenge to develop a secure and efficient routing scheme for FANET. To overcome these challenges, this paper proposes a novel cluster based secure routing scheme, which aims to solve the routing and data security problem of FANET. In this scheme, the optimal cluster head selection is based on residual energy, online time, reputation, blockchain transactions, mobility, and connectivity by using Improved Artificial Bee Colony Optimization (IABC). The proposed IABC utilizes two different search equations for employee bee and onlooker bee to enhance convergence rate and exploitation abilities. Further, a lightweight blockchain consensus algorithm, AI-Proof of Witness Consensus Algorithm (AI-PoWCA) is proposed, which utilizes the optimal cluster head for mining. In AI-PoWCA, the concept of the witness for block verification is also involved to make the proposed scheme resource efficient and highly resilient against 51% attack. Simulation results demonstrate that the proposed scheme outperforms its counterparts and achieves up to 90% packet delivery ratio, lowest end-to-end delay, highest throughput, resilience against security attacks, and superior in block processing time.

● CONFERENCES AND SEMINARS

29/04/2021 - Online

IEEE AI Standards: Ethical Consideration and Best Practices When Implementing AI in Your Organization

<https://muhammadbinsaif.com/IEEEcertificate.pdf>

26/05/2021 - Online

IEEE Virtual Tech Talk: IEEE 802 Networking Standards - 802.11 Wireless LAN Standards

<https://muhammadbinsaif.com/IEEE-WLAN-Standards.pdf>

25/04/2021 - 25/04/2021 - Online

A Webinar on Deep Dive in Computer Vision

<https://diceanalytics.pk/>

20/05/2021 – Online

IEEE Virtual Tech Talk: IEEE 802 Networking Standards – WLAN Sensing

<https://muhammadbinsaif.com/IEEE-WLAN-Sensing.pdf>

17/05/2021 – Online

IEEE Guide to Autonomous Vehicle Technology Virtual Event

<https://muhammadbinsaif.com/IEEE-AVT-Guide.pdf>

● CERTIFICATION

01/05/2021 – 22/05/2021

BlockChain Specialization (Corvit & PSEB)

This course training was provided and funded under the PSEB training project "Certification of IT Professionals".

<https://muhammadbinsaif.com/Muhammad-Bin-Saif-Blockchain-Specialization-Corvit-Certificate.pdf>

18/03/2021 – 16/04/2021

Programming Essentials in Python (Cisco Networking Academy)

This course covers all the basics of programming in Python, as well as general computer programming concepts and techniques, and the object-oriented approach.

<https://muhammadbinsaif.com/Muhammad-Bin-Saif-PCAP-Programmi-certificate.pdf>

01/03/2021 – 17/04/2021

Introduction to Internet of Things (Cisco Networking Academy)

This course has introductory knowledge of the Internet of Things and has an understanding of how it enables Digital Transformation along with emerging technologies such as data analytics, artificial intelligence, and the increased attention to cybersecurity.

https://www.credly.com/badges/5b44c6c0-f311-4a09-921d-2d1106bbf1ab/public_url <https://muhammadbinsaif.com/Muhammad-Bin-Saif-Introduction-to-iot-certificate.pdf>

01/03/2021 – 20/04/2021

Introduction to Cybersecurity (Cisco Networking Academy)

This course has a foundational knowledge of cybersecurity, including the basics of network security, DevSecOps (Development, Security, Operations), encryption, and cybersecurity laws.

https://www.credly.com/badges/1f640c65-6ef8-4d02-8037-79751c105965/public_url <https://muhammadbinsaif.com/Muhammad-Bin-Saif-Cybersecurity-Es-certificate.pdf>

01/03/2021 – 20/04/2021

Cybersecurity Essentials (Cisco Networking Academy)

This course has a foundational knowledge of cybersecurity, including the basics of network security, DevSecOps (Development, Security, Operations), encryption, and cybersecurity laws.

https://www.credly.com/badges/1f640c65-6ef8-4d02-8037-79751c105965/public_url <https://muhammadbinsaif.com/Muhammad-Bin-Saif-Cybersecurity-Es-certificate.pdf>

15/03/2021 – 19/04/2021

Networking Essentials (Cisco Networking Academy)

This course has knowledge of fundamentals of networking, how devices communicate, network addressing and services, how to build a home or small office network and configure basic security, the basics of configuring Cisco devices, and the basics of testing and troubleshooting network problems.

<https://muhammadbinsaif.com/Muhammad-Bin-Saif-Networking-Essen-certificate.pdf>

● HONOURS AND AWARDS

19/09/2019

Chinese Government Scholarship – Chinese Scholarship Council (CSC)

Currently pursuing my Masters (MS) degree under CSC scholarship. This is a fully-funded scholarship with 3000 RMB of a monthly award.

● LANGUAGE SKILLS

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	C1	C1	B2
CHINESE	A2	A2	A2	A2	A2

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

● RECOMMENDATIONS

Liang Zhao – Professor, Deputy Dean – lzhao@sau.edu.cn

Muhammad Bin Saif is unquestionably an exceptional candidate with an interdisciplinary research skills program. I believe he would be an outstanding asset to any institution and give him my highest recommendation.

Sumair Rasool – Team Lead – sumairrasoolcs@gmail.com – (+92) 3036200893

Based on my experience with Muhammad Bin Saif, I have no doubt about his ability to successfully carry out research in any field of computer networks. Hoping that these remarks may contribute to the realization of his professional ambitions and wish him all the best for his future.

<https://www.linkedin.com/in/sumair-rasool/>

Safdar Hussain – CEO – info@grouperlogic.com

Muhammad Bin Saif brings to all of his activities energy, enthusiasm, and commitment. This is to be expected in any successful member of the organization.

<https://muhammadbinsaif.com/Recommendation-Letter-Grouper-Logic.jpg>

13/03/2022



Muhammad Bin Saif