

Basharat Hussain

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About

Bashara Hussain is an accomplished Software Professional with over two decades of experience across diverse technology domains. He has a track record in software architecture, enterprise systems, and technical leadership, with extensive experience working internationally in the US, Denmark, Pakistan, and the UK.

Basharat Hussain received an M.S. in computer science from the International Islamic University (IIUI), Islamabad, Pakistan. He is pursuing a PhD in computer science from COMSATS University Islamabad, Wah Campus. He is a senior IT specialist with 23 years of experience developing software applications for multinational companies in Europe and the USA. He has professional experience in software design and architecture using various languages, including C++, C#, ASP.NET Core, Java, HTML, and Python.

He has extensive academic experience in teaching and research with major universities in Pakistan. He is working as a Lecturer with the Faculty of Computing, Fast University, Islamabad, Pakistan. His current research interests include applying deep learning, machine learning and federated learning to solve ongoing problems in intelligent transportation, LLM, motion diffusion.

Quick Review

- Technical Lead in Full Project Lifecycle: Inception to Go-Live
- Domain-Driven and Service-Oriented Architecture
- Scalable, Modular Design for Complex, High-Availability Systems
- FinTech & Compliance Apps, Anti-Money Laundering, Insurance and Logistics Domains
- Research interests: *ML, AI, Data Analysis, IoT, LLMS, and Federated Learning, Intelligent Transportation.*

Education

PhD	COMSATS University, Wah Campus , Computer Science	Feb 2019 – Now
	<ul style="list-style-type: none"> • Coursework GPA: 3.9/4.0 (<i>Pursuing</i>) • Research Interests: Deep Learning, Federated Learning, Intelligent Transportation, Language Models, Neural Networks 	
MS	International Islamic University, Islamabad , Computer Science	Sep 2014 – May 2016
	<ul style="list-style-type: none"> • CGPA: 4.0/4.0 (<i>With Distinction</i>) • Coursework: Image Processing, Data Mining, Computational Intelligence 	
MSc	International Islamic University, Islamabad , Computer Science	Aug 1998 – May 2001
	<ul style="list-style-type: none"> • CGPA: 3.57/4.0 • Coursework: Computer Architecture, Comparison of Learning Algorithms, Computational Theory, Visual Programming 	

Publications

Optimizing Urban Traffic Incident Prediction with Vertical Federated Learning: A Feature Selection based Approach	IEEE Transactions on Network Sci. & Eng.
Basharat Hussain , Muhammad Khalil Afzal	Oct 28, 2024
10.1109/tnse.2024.3487268 🔗	
A Novel Graph Convolutional Gated Recurrent Unit Framework for Network-based Traffic Prediction	IEEE Access
Basharat Hussain , Muhammad Khalil Afzal, Sheraz Anjum, Imran Rao, Byung-Seo Kim	Nov 17, 2023
10.1109/access.2023.3333938 🔗	

Intelligent Traffic Flow Prediction Using Optimized GRU Model

Basharat Hussain, Muhammad Khalil Afzal, Shafiq Ahmad, Almetwally M. Mostafa
[10.1109/access.2021.3097141](https://doi.org/10.1109/access.2021.3097141)

IEEE Access
Dec 01, 2022

Academic Experience

FAST University - NUCES [here](#), Lecturer (Full-time)

- Cloud Computing, Data Mining, Software Design and Analysis

Islāmābād, Pakistan
Jan 2024 – Now

Riphah International University [here](#), Senior Lecturer (Full-time)

- Cloud Computing, Advanced System Software Architecture, Software Design and Architecture, Java, .NET/C#, Python

Islāmābād, Pakistan
Feb 2020 – Jan 2024

COMSATS University, Wah Campus, Visiting Position

- AI/ML, Computational Intelligence, Web Engineering, Software Engineering

Islāmābād, Pakistan
2017 – 2018

Professional Experience

FindVaccineNow LLC [here](#), Partner & CTO

- As the Technology and Design Architect at [FindVaccineNow LLC](#) in Texas, USA, he has led the development of a highly scalable, global COVID-19 vaccine tracking platform, ensuring accurate and accessible data
- This platform connects individuals and businesses with providers offering COVID-19 vaccines, testing, and treatments. Accessible in over 135 countries, FindVaccineNow.com provides essential information on vaccine registration, locations, types, and availability
- Built on a crawler-centric architecture that efficiently aggregates and organizes real-time vaccination data, the platform played a crucial role during the COVID-19 epidemic. By partnering with industry leaders such as *Apple*, FindVaccineNow delivers a flexible, reliable solution tailored to the needs of an international audience

TX, United States
Dec 2020 – Now

Put & Track, Architect / Lead (in Offshore Development at Royal Brackets)

- Designed the back-end for the Application using Service Oriented Architecture
- Led the development of a real-time asset tracking system
- implemented SignalR for instant notifications in ASP.NET Core
- Utilized MongoDB for efficient schema design, ensuring a scalable solution
- His commitment to quality was demonstrated through rigorous testing practices, resulting in reliable and robust system performance

Arhus, Denmark
Aug 2019 – Oct 2020

Royal Brackets Technology, Founder & CEO

- Providing software solutions to foreign clients

Islāmābād, Pakistan
Jul 2019 – May 2023

Route Trading, Chief Architect (Full-time)

- Managing Product Architecture & Design from Inception till Releases
- Identify Business & Stakeholder Requirements, transform Technical Specs
- Code Standardization, Code Reviews, Alignment with System Architecture
- Managing and controlling DevOps, CI/CD using VSTS

London, UK
Aug 2016 – Oct 2020

Integrated Enterprises, Lead / Software Developer (Full-time)

- [EconoRepairs](#) project was delivered while working under tight deadlines
- Focused on payment integration and merchant transactions, this B2B mobile repair solution is designed for deployment across multiple locations in Texas, USA
- Managed product design and development, ensuring seamless functionality for a multi-location rollout

Islāmābād, Pakistan
Mar 2017 – Feb 2019

- Integrated payment solutions with ASP.NET Core, utilizing Boiler Plate, LINQ, HTML5, JQuery, JavaScript, Fluent Validation
- Supported diverse payment options, including PayPal, Stripe, ACH Accounts, Wallets, and other financial transaction methods, for enhanced user flexibility

Synergy Pakistan, Tech Lead & Principal Software Engineer (Full-time)

Islāmābād, Pakistan
Jan 2013 – Aug 2016

- Participated in technical discussions regarding various strategic systems, contributing to the development and enhancement of publishing systems across Denmark for the country's oldest company in this domain. The project encompassed developing new systems, optimizing internal processes, and standardizing data formats to ensure efficiency and consistency
- Served as Project Lead, Architect, and a problem-solver for complex challenges. Utilized technologies such as ASP.NET, SOA, frontend development with HTML and JavaScript, and UML for system design.
- Participated in technical discussions regarding various strategic systems, contributing to the development and enhancement of publishing systems across Denmark for the country's oldest company in this domain. The project encompassed developing new systems, optimizing internal processes, and standardizing data formats to ensure efficiency and consistency. Served as Project Lead, Architect, and a problem-solver for complex challenges.
- **Skills:** Microservices, ASP.NET MVC, ASP.NET Web API, HTML, JavaScript, jQuery, LINQ, Enterprise Architecture, UML Tools, HTML and JavaScript

TEO International, Solution Architect & Principal Software Engineer (Full-time)

Islāmābād, Pakistan
Apr 2010 – Dec 2012

- I worked on projects ranging from web-based business solutions to content management systems, supervising teams of 4-10 members and managing end-to-end project delivery. I also contributed to organizational initiatives, including being an active member of the Code Helper quality assurance group.
- Significant work involved traveling to Denmark for requirements gathering for publishing industry projects. A key project, [Gyldendal Uddannelse](#), was delivered with a team under tight deadlines. The project involved around 3200 man-hours, utilizing Sitecore CMS, C# and ASP.NET
- **Skills:** Project Estimation, C#, Service-Oriented Architecture (SOA), ASP.NET Web API

Ciklum Pakistan, Software Architect & Technical Lead (Full-time)

Islāmābād, Pakistan
Feb 2005 – Apr 2010

- Worked as Technical lead on Insurance domain called 'European Insurance'
- Visited Denmark for Business Requirement Elicitation on '[Dangaard](#)'
- Developed a core P2P file sharing engine in C++/STL for 'Eovendo'

Workplains (pvt). Ltd., Senior Software Engineer (Full-time)

Islāmābād, Pakistan
Oct 2002 – Apr 2005

- Designed/developed WORK+ rule-based engine for routing Workflow processes
- **Skills:** VC++, COM/DCOM, STL, ActiveX, VB6, SQL Server & DB2

Buraq Integrated Solutions, Software Engineer (Full-time)

Islāmābād, Pakistan
Nov 2001 – Jul 2002

- Worked as developer on Document Management System Modules
- **Skills:** C++, VC++ 6, COM, DMS

Technologies

Languages: C++, C, Java, C#, SQL, JavaScript, HTML, Python

Technologies: Cloud Computing, AI, ML, .NET, MSSQL Server