Farrukh Mirza

Software Engineering Manager, Architect & Engineer

+353-87-2719767 farrukhmpk@gmail.com	https://farrukhmpk.github.io www.linkedin.com/in/dr-farrukh-mirza https://github.com/farrukhmpk	(Ireland) Stamp 4 – Full work permit

Summary

I thrive in fast paced environments in a leadership role. As a senior leader & strategist, I believe in innovation, efficiency, success & delivery through smart hard work & taking responsibility. I am currently leading & mentoring project managers, business analysts & technical architects, while influencing key business decision makers & stakeholders. I have lead, managed and mentored graduate & senior backend engineers, UX/UI developers, test engineers and technical software & test architects in co-located and geographically distributed teams. I have more than 7 years of experience of team leadership and management, project management, enterprise software architecture, and overall 15 years of experience of software design, development, integration and maintenance. I have worked in banking, mobile virtual network operations, customer relationship, energy, financial transaction (e-Banking, e-Commerce), software lifecycle management and research environments. I maintained excellent relationship with customers, exceeding their expectations & advising them on their software investments. I have worked with near shore & offshore teams, and outsourcing business partners. I have experience in troubleshooting large complex systems in addition to personnel & business crises management. I have successfully hired & built software development teams by implementing hiring strategies to attract talent based on business situation. I have proven ability to adapt with diverse professional experience in Republic of Ireland, Portugal, Kingdom of Bahrain and Pakistan.

Education

University/Institute	Course/Degree	Timeline
University of Dublin, Trinity College, Republic of Ireland	Doctor of Philosophy in Computer Science Title: Exploiting Unstable Paths in Urban-Scale Wireless Sensor Networks	2009-2014
University of Dublin, Trinity College, Republic of Ireland	Postgraduate Diploma in Statistics with Distinction	2009-2010
IELTS Certification	English Language Band 7.0	April 2008
Sir Syed University of Engineering and Technology, Pakistan	Bachelor of Science in Computer Engineering Gold Medal for First Class First Position Gold Medal for Mathematics Received multiple scholarships from govt and university	2001-2004

Professional Skills & Strengths

Area	Skill Level
Team Management, Team Leadership, Project & Programme Management (Scrum, Kanban)	■■■■■■■■■■□
Solution/System/Software Architecture	■■■■■■■■■■□
Web Applications, APIs (REST/SOAP), Microservices	■■■■■■■■■■□
Process & Operations Automation, Containers, DevOps & Tooling, Cloud	■■■■■■■■□□
Software Design, Development & Analysis	■■■■■■■■■■□

Management, Architecture & Technical Skills Summary

Area	Skills
Management Skills	Team Leadership & Management (Project Managers, Business Analysts, Senior Software Engineers, Technical Architects, UI/UX Developers, Test Architects), Agile Project/Program Management, Scrum, Kanban, Scoping, Customer Relationship, Crises Management, Product Backlog Grooming, Team Mentorship, Communication (Written/Verbal)
Architectures	System & Solutions Architecture, Microservices, Enterprise Service Bus (ESB), Middleware, RESTful, SOA, Conventional MVC & Reactive Web Applications, Highly Scalable Distributed Systems.
Design Methodologies & Patterns	UML, ERD, ArchiMate, Enterprise Integration Patterns (EIP), GoF, OOP/OOAD, Strategy, Factory, Abstract Factory, Front Controller, Template Method, Observer, Singleton, Circuit Breaker, HATEOS, Saga, Event Sourcing, Service Façade, API Gateway, TDD, BDD.
Enterprise Integration	SSO (CAS/Shibboleth), OAuth, OIDC, SAML2, SOAP, REST, APIs, JMS, Apache Camel, Apache ServiceMix, Apache CXF, hMailServer, Postfix, ejabberd, LDAP.
Programming Languages	Java (J2EE), JSP, JSTL, HTML/DHTML, JavaScript, SQL/PLSQL/JPQL, Linux Shell Scripting, Windows PowerShell and Batch Scripting, C++, nesC.
Frameworks	JQuery, JQuery UI, Bootstrap, AJAX, Spring Core, Spring MVC, Spring Security, Spring Boot, Spring Data JPA, Spring LDAP, Spring AOP, Spring REST, Hibernate, Java Message Service (JMS), Java Persistence API (JPA), JNDI, Java Cryptographic Extensions (JCE), Apache POI, Jackrabbit, Junit, Zebra Crossing (Zxing), XPath, JAXB, ehcache, TinyOS, uDig (Eclipse Plugin Development), MSMQ, MFC, STL, ATL, Win32 API, WinCrypt, CryptoPP.
DevOps, DB, Build & Other Technologies	Nexus, Jenkins, Bitbucket, PostgreSQL, MS SQL Server, Oracle, MySQL, Docker, Apache, Tomcat, WildFly, WebLogic, Azure, Vagrant, Maven, DokuWiki, .Net Core, Git, Mercurial, SVN, OpenSSL
Corporate Technologies	MS Office (365), MS SharePoint, Dynamics 365, MS Teams, Jira, Confluence
Protocols & Standards	HTTP/HTTPS, SSL/TLS & MA-TLS, AMQP, SSH, RDP, RSA, AES, DES, SHA, IEEE-802.15.4 (Zigbee), TCP/IP, RS-232, ISO-8583

Professional Work

Senior Solution Architect/Manager - Bank of Ireland
http://www.bankofireland.com/ March 2019 – Present

Attribute	Description
Team	❖ Senior member of the design and technical management team. ❖ Co-located and distributed team across multiple sites in Dublin.
Programme	❖ PSD2 and CBSP
Key Achievements	❖ Leading, Coaching & Mentoring Java software development team & architects, performance testing & optimization teams & architects ❖ Leading DevOps, Containerization & Automation strategies. ❖ Influencing information security designers & reviewers ❖ Encouraging senior architects in adopting Jira & Confluence for architecture operations within the PSD2 programme ❖ Architected secure secret generation & management automation system using enterprise vault
Responsibilities	❖ Solution & System architecture. ❖ Lead & coach technical architects/designers, technical leads and senior engineers, project managers/scrum masters, product owners & business analysts. ❖ Vendor management & selection. ❖ Crises & Risk Management (technical). ❖ Architecture, design & technology reviews and selection. ❖ Product(s)/Platform roadmap development.

	❖ Coordination with Principal Architects in strategy, architecture & innovation (SA&I) division.
	❖ Coordination and task assignment to Project Managers.
	❖ Coordination with multiple teams, i.e., Infrastructure, Security, DevOps, Application Support, Technology Services.
	❖ Reporting to Lead Architect & Programme Delivery Lead.

Development Team Manager/Solutions Architect – Client Solutions Ltd (Formerly TechData Client Services, Avnet Client Solutions)

Additional Roles: Software Development Team Management & Leadership, Application & System Architecture, Program & Project Management, Product Ownership, Customer Engagement

http://www.clientsolutions.ie/   February 2013 – February 2019

Customer	Projects
Tesco Mobile Ireland (Multi-year engagement, budget in excess of €500K)	❖ Integrated Management Platform (Microservices Architecture) ❖ Customer Retention, Collection, Payments (DataCash) and Complaint workflow Systems ❖ Content Management and front desk news & information system ❖ Single Signon and microservices. ❖ Public facing Self-care System ❖ Campaign Management System
Irish Water	❖ Commercial Archives
Vayu Limited	❖ Integration with third-party services over REST and SFTP
Internal (Client Solutions)	❖ Reference Data Management System (RDMA) – Product development management and leadership. Product Budget ~ €150K ❖ Introduction of Agile Lifecycle Management Software ❖ Implementation of DevOps strategy ❖ Consolidation of multiple SCM repositories into single Bitbucket (Git) ❖ Consolidation of binary repositories into single Nexus ❖ Consolidation of knowledgebase using opensource Dokuwiki ❖ Consolidation of CI/CD strategy using Jenkins across Java and .Net teams ❖ Research in Data Science and new ventures

Attribute	Description
Team	Product/Platform Engineering Team Manager and Leader. Geographically distributed & scalable team of variable size of 3 to 7 (Nearshore).
Key Achievements	❖ Managed and lead Java software development team. ❖ Lead DevOps practise while introducing integrated development approaches over multiple technology teams. ❖ Introduced Microservices architecture and oversaw migration from monolithic applications towards highly distributed and scalable RESTful microservices, powered by single signon. (10 frontend systems and API Gateway, 28 backend services and 10 batch processing engines) ❖ Introduced customized agile practises and management tool to optimize team's deliverability and effectiveness. ❖ Introduced Rally as the tool of choice for agile practice (Scrum/Kanban) (adopted by multiple teams). ❖ Successfully delivered multiple products and projects to local and international customers. ❖ Developed and maintained excellent relationship with customers. ❖ Lead & Managed source code repository migration from multiple SVN and Mercurial repositories into a single Bitbucket (Git) repository. ❖ Laid the foundations for an integrated CI/CD process using Jenkins and Nexus

	servers over Azure IAAS platform.
Responsibilities	❖ Java & UI/UX Team Recruitment: Face-to-face & Phone Interviews, Shortlisting, Requirement outlining. ❖ Team Management & Leadership: Java Web App/API, Web Fronted (UI), UX, DevOps, Advanced Analytics ❖ Team performance reviews and 1:1 ❖ Offshore partner search, evaluation & selection and managing negotiation along with Director of Operations for engagement. Criteria: cost, resource profiles, time zone, delivery capability. ❖ Crises Management (technical & personnel) ❖ Project planning & task assignment. ❖ Release and iteration planning. ❖ Scope generation ❖ User story, tasks and defects management (estimation, tracking and assignment). ❖ Enterprise Architecture and technology selection. ❖ Product(s)/Platform roadmap development. ❖ Web application & API, system, integration, data architecture ❖ Solution and Software design with 50% hands-on development ❖ Customer communication - Reporting to the Heads of business and technology. ❖ Senior Management communication - Reporting directly to the operations, managing and technical directors. ❖ Inter and intra team communication. ❖ Code reviews & quality assurance ❖ Software License Cost Optimisation

Research Assistant & PhD Researcher- University of Dublin, Trinity College
Distributed Systems Group

www.dsg.cs.tcd.ie   July 2008 – July 2009 & July 2009 – April 2014

Funding Agency	Projects
Lero	Exploiting Unstable Paths in Urban-Scale Wireless Sensor Networks
European Union under FP7	Embedded monitoring (EMMON)
Enterprise Ireland	Development Environment for Sensor Networking Applications (DESNA)

Attribute	Description
Team Size	Core Team member. Multiple teams of average size of 3 each distributed across Europe.
Key Achievements	❖ Developed Peer-to-Peer communication framework over TCP/IP ❖ Created routing protocol for wireless sensor network, capable of intelligently providing fault tolerance, energy conservation, congestion and latency reduction depending on the network conditions.
Responsibilities	❖ Research into wireless sensor networking protocols ❖ Design and Development of embedded wireless sensor network middleware ❖ Develop temporal & spatial aggregation techniques ❖ Design & develop thick client domain modelling & simulation software for geographic visual modelling ❖ Design & Develop SOAP webservices ❖ Assist senior researchers in their development tasks ❖ Development of embedded distributed middleware ❖ Coordination with external teams during the course of the projects.
Publications	❖ Mirza, F., Bouroche, M., Cahill, V.: Unstable path routing in urban-scale wsn. ACM

	SIGBED Review 9(3) (2012) 24–28
	❖ Tennina, S.; Bouroche, M.; Braga, P.; Gomes, R.; Alves, M.; Mirza, F.; Ciriello, V.; Carrozza, G.; Oliveira, P. & Cahill, V. "EMMON: A WSN System Architecture for Large Scale and Dense Real-Time Embedded Monitoring," In Proceedings of IFIP 9th International Conference on Embedded and Ubiquitous Computing (EUC), 2011, 150-157.

Software Development Engineer - Hindsa Technologies Limited

www.hindsa.com   November 2006 – June 2008

Attribute	Description
Product	❖ eXtreme Manager - Software development lifecycle management solution.
Key Achievements	❖ Switch from system level C++ development to Java Enterprise application development using Spring MVC Framework. ❖ Trained in Agile software lifecycle management
Responsibilities	❖ Software development ❖ Test driven development ❖ Quality assurance ❖ Customer support

Team Lead & Software Engineer - Avanza Solutions (Pvt.) Ltd.

www.avanzasolutions.com   February 2005 – October 2006

Products	Description
iSurveillance	Surveillance for added security for ATM customers. Captures video after detecting proximity and sends to a server. In addition, developed solution for housekeeping.
Biometric Finger Print	Additional layer of authentication for automated teller machines (ATM) for customer authentication.
Rendezvous	Financial middleware to mediate among multiple vendors.
Nimbus	ATM controller.

Attribute	Description
Team	Team Lead. Co-located team of 3 members.
Key Achievements	❖ Oversaw project from initiation to completion ❖ Lead the implementation of e-Banking suite in Bank Muscat International (Bahrain) ❖ Implemented prototype ATM surveillance software ❖ Implemented prototype Bio-metric finger print scan/matching software for additional ATM authentication
Responsibilities	❖ Team Leadership ❖ Task management (estimation, tracking and assignment). ❖ Collaboration with onsite & off-site development teams. ❖ Reporting to senior management, reporting directly to the CEO and CTO. ❖ Customer communication reporting to the Head of IT. ❖ Development and customization of the products. ❖ Integration with vendor partners. ❖ Detailed data analysis & trouble shooting. ❖ Customer training management. ❖ On-site implementation of e-Banking solution for Bank Muscat International, Kingdom of Bahrain.