Dr. FAIZAN UR REHMAN

CONTACT

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SKILLS

- Solution Architect
- Digital Transformation
- Data Management
- Data Science
- Research and Innovation
- Agile Methodologies
- Scrum Ceremonies
- Software Development Lifecycle (SDLC)
- Project Management
- Source Control Management
- Software Engineering Best Practices
- Structured & Unstructured Data Solutions
- Algorithms & Metrics
- IT Strategic Planning
- Performance & Scalability Optimization
- Analytics Reporting
- Workforce Transformation
- Business Intelligence

PERSONAL PROFILE

- **Nationality:** Indian
- **Date of Birth:** 27 July 1984
- **Driving License:** Saudi Arabia and India
- **Marital Status:** Married
- **Father's Name:** Suhail Ur Rehman
- **Address:** Rehman House, cooperative bank colony, Rampur UP-244901, India
- **Languages:** English, Hindi

PROFILE SUMMARY

Highly analytical and results-driven IT Executive, offering extensive experience in driving corporate profitability, productivity, and competitive performance through skillful alignment of technical resources with enterprise mission. Skilled at boosting IT infrastructures to achieve organizational goals, improved performance, and enhanced customer experience. A distinguished record of publication in academic journals all over the world with 40+ publications/patents. Adept at developing detailed project plans, schedules, project timelines, status reports, and processes to ensure customer satisfaction, project continuity, and the timely delivery of services. Experienced in the full software development lifecycle, from concept through delivery of next-generation applications and customizable solutions. Demonstrated history of implementing new technologies to strengthen security posture and enhance operational efficiency. Comfortable delivering quality solutions in a fast-paced environment with rapidly changing priorities.

CORE COMPETENCIES

- Effective leadership and analytical skills with strong project management abilities
- Exceptional experience in strategically using technology to enable business strategy
- Holistic enterprise architecture; understanding of network architecture and data integrity
- Manage complete software development life cycle of complex applications and projects
- Solid ability to develop and implement IT strategies, tactical plans, and annual work plans
- Demonstrated ability to manage competing priorities in a highly demanding environment
- Provides IT infrastructure planning, testing, implementation, and operational support
- Strong written and verbal communication skills for documentation and correspondence
- Outstanding interpersonal, organizational, time management, and prioritization skills

TECHNICAL SKILLS

Languages known:	C/C++, JAVA, JAVASCRIPT, PHP, Assembly Language
Databases:	SQL, PostgreSQL, PostGIS
Platforms worked on:	Win 7, 8Xs, 10, LINUX, UNIX
Tools:	Well versed with MS-Office
Prototyping Tools:	Microsoft Visio, JUDE, JustinMind
Subversion Tools:	SVN, PVCS, GitHub
Memory leaks Tools:	Klocwork, Efence, Valgrind
Scripting:	Shell
Design Patterns:	Factory, MVC, and Singleton
Coding Tools:	Source Insight, Eclipse, Vi/Vim Editor
Debugging Tools:	Gdb, Visual C++
Amazon Cloud Services:	Creating Instance, Load Balancer, Cloudwatch, Alarms, DynamoDB
Big Data:	ElasticSearch, DynamoDB, Hadoop
Management:	JIRA, HiTask, Project Plan, Risk Involvement
Consultant:	Feasibility Study, Software Require Specification, High Level Design, Low Level Design, Test Plan, Test Cases, Efforts Estimation, Software Integration with 3rd party APIs or system
Mobile Application:	Android and IOS. Uploaded several APK and IPA on play store and apple store respectively for Ministry of Haj, GISTIC and Wadi Makkah, Saudi Arabi

EDUCATION

- **PhD (Multiple Research Awards) –** University of Grenoble Alpes, France **2014 – 2018**
- **Master of Computer Applications (9.53/10, Gold Medalist)**
  Hamdard University, New Delhi **2005 – 2008**
- **Bachelor of Computer Applications (84.53%, Silver Medalist)**
  Hamdard University, New Delhi **2002 – 2005**

KEY PATENTS APPLICATION PUBLISHED/GRANTED

- Capacity constrained and user preference-based scheduler, rescheduler, simulation, and prediction for crowds in spatio-temporal environments https://patents.google.com/patent/US11151668B1
- Scheduling techniques for spatio-temporal environments (https://patents.google.com/patent/US20220180459A1)
- Deep learning framework for congestion detection and prediction in human crowds (https://patents.google.com/patent/US20220254162A1)
- Spatio-Temporal Method and System to Implement Boundary Regulation (http://www.freepatentsonline.com/y2016/0073230.html).
- Method and System for The Generation of Context Aware Services Based on Crowd Sourcing (http://www.freepatentsonline.com/y2016/0072900.html).
- Method and System for Detecting, Tracking, and Visualizing Joint Therapy Data (http://www.freepatentsonline.com/y2016/0096072.html).
- Spatio-Temporal Method and System to Implement Boundary Regulation (http://www.freepatentsonline.com/y2016/0073224.html).
- Spatio-Temporal Method and System to Implement Boundary Regulation (http://www.freepatentsonline.com/WO2016038412A1.html).

REFERENCES

- Mr Osama Fatehdin, Naqaba, Saudi Arabia
- Dr. Mohammad AlQarni, Tafweej, Haj Ministry, Saudi Arabia.
- Dr. Abdullah Murad, CEO, Softcare, Saudi Arabia
- Prof. Saleh Basalamah, Umm Al-Qura University, Saudi Arabia.

PROFESSIONAL EXPERIENCE

Solution Architect – NCAI, SDAIA (https://sdaia.gov.sa/)
- Responsible for IT Architecture, Infrastructure, and Methodology.
- Develop technical aspects of the Academy platform to ensure alignment with its business goals.
- Design and manage databases and data flows to ensure smooth business operations

CTO - First City (https://www.firstcity.ai/)
- Responsible for IT Architecture, Infrastructure, and Methodology.
- Develop technical aspects of the company's strategy to ensure alignment with its business goals.
- Discover and implement new technologies that yield competitive advantage.
- Monitor KPIs and IT budgets to assess technological performance.
- Design and lead R&D programs and projects across the breadth of company's strategic priorities.

Solution Architect & Consultant
Naqaba, The General Syndicate of Cars, Saudi Arabia. (https://www.naqaba.com.sa/)
- Requirement and Data gatherings from the AVL vendors of Saudi Arabia
- Design System to track the movement of 20000 buses in Haj and Umrah
- Design System Architecture for spatial and non-spatial analytics and business operations.
- Manage STC Bluvalt and Alibaba cloud infrastructure
- Supervise Feasibility and Load testing of the projects

Technical Consultant and Project Manager
Tafweej Unit, Ministry of Hajj and Umrah, Saudi Arabia. (https://tafweej.haj.gov.sa/)
- Provide consultative guidance on data management and data governance-related principles within the company, while also inputting on external client proposals when necessary
- Design and manage databases and data flows to ensure smooth business operations
- Develop conceptual data models to improve processes and add strategic value to the business
- Examine data, processes, and technologies to evaluate the current state and critical problems.

R&D Director - SafeCrowd, Ministry of Education. (http://www.safecrowd.ai)
- Developed and maintained systems to support research coordination and goals.
- Managed the research process and provided technical assistance and support when need.
- Analyzed quantitative data using robust methods, interpreted, described, and published findings.
- Comprehensively reviewed and analyzed academic literature.

Technical Consultant – Yamama and SAR (https://yamamahc.sa/)
- Prepared and delivered man loading for train operational during Hajj.
- Developed curricula and course material that can be used for training.
- Developed presentation to explain and plan for crowd management of train stations

Senior Software Engineer/Sub-Project Lead - SAMSUNG (www.samsungnoidalab.com)
- Planned out the blueprints for software projects, including defining the scope, allocating resources, setting deadlines, laying out strategies, and indicating tests & maintenance.
- Assembled and led the project team, participating in and supervising each stage of the project.
- Ensured each project stays on schedule and adheres to the deadlines.
- Created a project budget and ensured the project adheres to the budget as closely as possible.

Software Engineer - ARICENT (www.aricent.com)
- Executed full software development life cycle (SDLC).
- Developed flowcharts, layouts and documentation to identify requirements and solutions.
- Wrote well-designed, testable code, produced specifications & determined operational feasibility.
- Integrated software components into a fully functional software system.
- Developed software verification plans and quality assurance procedures.

KEY PROJECTS

- Tafweej- *System that create scheduling for stoning ritual and movement of pilgrims*
- Situational Awareness and Decision-Making Support for Crowd Management in Mina
- Manasikana- *Official Hajj and Umrah Mobile App*
- A Real-time Route Planning and Emergency Evacuation Management Tool for Hajj and Omrah Activities (Umm Al-Qura (Saudi Arabia), Purdue University (USA) and Minnesota University (USA)
- Constraint-Aware Framework for Continuous Spatial Queries over Moving Objects (Umm Al-Qura (Saudi Arabia), and Purdue University (USA)
- HajjMemo- *Pilgrims-Sourced Data Collection for Documentation and Continuous Improvement of Hajj & Umrah Services (Umm Al-Qura (Saudi Arabia)*
- Open-Source Context-Aware E-Learning Framework for Students with Disabilities
- Generic Man Machine Interface, Special Support Package, MMP (Man Machine Kernel Platform

AWARDS & ACHIEVEMENTS

- Received **Grand Winner Prize** in **KAUST Challenge** of 1 Million SAR
- Received excellent feedback report from the PhD defense committee.
- Received **award** of **60,000 SAR** for filing patents in USPTO, Umm Al-Qura University, KSA in 2014
- Project Submitted and accepted in **KACST** for **2 million SAR grant** as a researcher with Dr. Mohammed Abdur Rahman (PI), Dr. Elham Hassanain (Co-PI), Dr. Salman Asad (Co-PI) and Dr. Abdullah Murad (Co-PI).
- 3 Project Submitted and accepted in **King Abdulaziz University** for 100,000 SAR as a (Co-PI) , 1 in 2021 and 2 in 2022.
- **Four Best Papers** award in international conferences
- **One Best Presentation** award in IEEE big data conference, USA, 2015
- **Nine Patents published/Granted online** by USPTO and PCT
- Completed **3 KACST** (2 million SAR) project and **2 Hajj core** projects as a researcher and developer, Umm Al-Qura University, KSA in collaboration with **University of Minnesota, USA, Purdue University, USA**.
- **Business trip** to **Nokia Siemens Network** office in **China** for the deployment of the project.
- Got **Individual Excellence Snap Award** in Aricent for handling complete project all alone
- Got many Awards at the team level and company level like:
- **Best Employee of the month**,
- **Team award and**
- **Most Number of Appreciation cards** in the Team.
- Received **GOLD MEDAL** in Master of Computer Application.
- Received **SECOND PRIZE** in Bachelor of Computer Application.
- Hajj Profile https://firstcity.ai/safehajj/haii-related-work/

SELECTED PUBLICATIONS

- Emad Felemban, Faizan Ur Rehman, Akhlaq Ahmad, Shoaib Shahzad Obaidi, "Analyzing Pedestrian Crossflow Through Complex Transfer Corridors," Future of Information and Communications Conference (FICC) 2021 to be held from 29-30 April 2021 in Vancouver, Canada
- Emad Felemban, Abdur Rahman Muhammad Abdul Majid, Faizan Ur Rehman, Ahmed Lbath, "Low-Cost Digital Twin Framework for 3D Modeling of Homogenous Urban Zones," Computing Conference, July 2021, Canada
- Emad Felemban, Sultan Daud Khan, Atif Naseer, Faizan Ur Rehman, Saleh Basalamah, "Deep Trajectory Classification Model for Congestion Detection in Human Crowds", CMC-Computers, Materials & Continua Journal, Vol.68, No.1, March 2021.
- Emad Felemban, Faizan Ur Rehman, Akhlaq Ahmad, Muhamad Felemban, "A Modelling and Scheduling Tool for Crowd Movement in Complex Network", Intelligent Automation & Soft Computing Journal, 2021
- Omar Hussain, Emad Felemban, and Faizan Ur Rehman. "Optimization of the Mashaer Shuttle-Bus Service in Hajj: Arafat-Muzdalifah Case Study." *Information* 12, no. 12 (2021): 496
- Emad Felemban, Faizan Ur Rehman, "An Interactive Analysis Platform for Bus Movement: A Case Study of One of the World's Largest Annual Gathering." In: IoT for Sustainable Smart Cities and Society. Internet of Things. Springer, Cham, 2022
- Armocida B et al. "Burden of non-communicable diseases among adolescents aged 10-24 years in the EU, 1990-2019: a systematic analysis of the Global Burden of Diseases Study 2019". Lancet Child Adolesc Health. 2022 Jun;6(6) 367-383. doi:10.1016/s2352-4642(22)00073-6. PMID: 35339209
- Saleh Basalamah, Emad Felemban, Sultan Daud, Atif Naseer and Faizan Ur Rehman, "Deep Learning Framework for Congestion Detection at Public Places Via Learning from Synthetic Data", Journal of King Saud University - Computer and Information Sciences (Minor Revision), 2022

APPLICATIONS AS A PROJECT MANAGER/CONSULTANT

- https://tafweej.haj.gov.sa/
- https://play.google.com/store/apps/details?id=com.tafweejapp&gl=SA
- https://play.google.com/store/apps/details?id=com.tafweejapp&gl=SA
- https://apps.apple.com/us/app/%D8%AA%D9%81%D9%88%D9%8A%D8%AC-%D8%AD%D8%A7%D8%AC/id1626723398
- http://safecrowd.ai
- https://www.haj.gov.sa/en/News/Details/12353
- http://smarthajj.com/
- https://play.google.com/store/apps/details?id=com.hajjandumrah&hl=en
- https://play.google.com/store/apps/details?id=com.smarthajj&hl=en
- https://play.google.com/store/apps/details?id=com.familyconnect.pro&hl=en
- https://play.google.com/store/apps/details?id=com.hajjmessenger&hl=en

RESEARCHER PROFILE

- http://dblp.uni-trier.de/pers/hd/r/Rehman:Faizan_Ur
- https://scholar.google.com/citations?user=e3Sf1DwAAAAJ
- https://www.researchgate.net/profile/Faizan_Rehman
- https://www.scopus.com/authid/detail.uri?authorId=56432530200
- https://orcid.org/0000-0001-6230-3056

PhD RESEARCH:

The PhD research work focused on designing and developing efficient tools for multiscale social event extraction and visualization. It addresses an important and timely problem related to the integration of heterogeneous social media sources in order to infer knowledge-based layers, and for the discovery and visualization of Events of Interest (EOI).

The work includes many concepts and associated technologies towards building smart maps and integrating heterogeneous data sources. The ideas were implemented to develop a prototype based on natural language processing and multiple clustering techniques and hence creating a unique and dynamic map browsing for the user to extract specific events of interest.