ARASH KORRANI
Principal Software Engineer

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📇 Profile

With over a decade of extensive experience in the IT industry, I have established myself as a leader in designing,implementing, and optimizing robust back-end systems. My expertise lies in building scalable, high-performancesolutions leveraging cutting-edge technologies such as Asp.Net ↗ Core, AWS, C#, SQL Server, Python, and Azure. Ispecialize in microservices architecture, API development, database optimization, and serverless computing, ensuringreliable and efficient systems that meet complex business requirements. My commitment to delivering backendexcellence extends to implementing advanced debugging, testing, and performance tuning processes for seamlessintegration and superior user experience.

💼 Work Experience

Supervisor Integration Solution, *NSW Rural Fire Service*   Apr 2025 – present / Sydney, Australia

- Lead the design, delivery, and continuous improvement of identity and integration solutions, ensuring alignment with organisational goals and high service reliability.
- Architected and delivered secure and scalable integration solutions using .NET Core, C#, and Okta Identity Adapters, enhancing access control and single sign-on capabilities across enterprise systems.
- Oversaw the implementation of Infrastructure as Code (IaC) using Terraform and AWS-native services, enabling fully automated, reproducible, and compliant cloud deployments.
- Led the development of end-to-end integration with SAP systems using custom-built and standard adapters, streamlining business workflows and data synchronization.
- Built and maintained modern web interfaces using React and TypeScript, enabling responsive and intuitive user experiences for administrative and operational dashboards.
- Developed and maintained CI/CD pipelines with Git, TeamCity, and AWS CodePipeline, enabling reliable and secure software delivery across development stages.
- Delivered scalable AWS microservice-based solutions leveraging Lambda, API Gateway, EventBridge, and SQS, improving modularity and fault isolation.
- Promoted code quality and performance through rigorous code reviews, mentoring, and implementation of TDD and best practices in both backend (.NET Core) and frontend (React/TypeScript) development.
- Managed cross-functional technical teams and third-party vendors, aligning project goals, setting SLAs, and ensuring continuous performance optimization.

RODE Back End Developer, *SESLHD (NSW Health)*   Aug 2021 – Sep 2024 / Sydney, Australia

- Demonstrated ability to identify and engage stakeholders, building trust and fostering collaboration to achieve project goals. Proficient in stakeholder analysis, mapping, and communication planning to align business requirements with technical solutions.
- Designed and developed backend solutions using Python and RESTful APIs to support NSW Health's RODE platform, ensuring high scalability and reliability.
- Implemented microservices architecture and Single Sign-On (SSO), utilizing Redis for caching to improve the performance and scalability of the RODE system, enabling faster data retrieval and enhanced user experience.

- Utilized AWS cloud services, including serverless technologies like AWS Lambda and API Gateway, to deploy scalable and cost-effective back-end solutions for seamless integration.
- Implemented DevOps and CI/CD pipelines using GitLab, automating build, test, and deployment workflows to enhance development efficiency and reduce time-to-market.
- Designed and executed comprehensive QA testing strategies, including automated test cases, regression testing, and performance testing, to ensure system reliability and quality assurance.
- Developed robust test automation frameworks using Python and Selenium, enabling efficient testing and consistent validation of back-end services during development cycles.
- Ensured adherence to Data Governance best practices for secure and efficient handling of sensitive data, mitigating organizational risks through robust data security protocols.
- Leveraged Snowflake data warehousing for effective database schema design, mapping, and optimization to enhance data accessibility and system reliability.
- Orchestrated the migration and mapping of complex datasets from HIE to LRS Edward, ensuring data integrity, eliminating redundancy, and optimizing database performance.
- Integrated refined datasets into Power BI reporting systems, developing APIs to support dynamic data queries and ensuring seamless integration with back-end processes.
- Implemented and optimized ETL pipelines using Python to extract data from disparate sources, apply transformations, and load it efficiently into data warehouses, enhancing reporting capabilities and decision-making processes.

Senior Software Engineer, *Ondicom Digital*   May 2021 – Jul 2021
                                                                                                      Sydney, Australia
- Spearheaded database and architecture design for back-end solutions, leveraging MS SQL Server and .NET Core C# to build scalable and maintainable systems.
- Led the migration of legacy systems from .NET Framework to .NET Core, significantly enhancing performance, scalability, and maintainability while minimizing technical debt.
- Managed the maintenance and ensured high availability of production systems in fast-paced client-based applications, implementing robust monitoring and recovery mechanisms to prevent downtime.
- Conducted comprehensive requirement analysis by collaborating with customers and stakeholders to implement system updates, ensuring compatibility with the latest technologies like .NET Core 5, MVC, and RESTful APIs.
- Designed and developed RESTful APIs using ASP.NET Web API to enable seamless communication between front-end and back-end systems, optimizing data exchange and functionality.
- Utilized ASP.NET Core MVC to rewrite and optimize critical application modules during the migration process, ensuring enhanced performance and maintainability.
- Applied a Test-Driven Development (TDD) approach to improve code reliability and maintainability, writing unit tests and automated test scripts to validate functionality early in the development lifecycle.
- Designed and executed QA strategies, including regression, performance, and functional testing, to ensure system integrity and reliability post-migration.
- Automated testing workflows using tools like Selenium and NUnit, reducing manual effort and enhancing the speed and accuracy of testing processes.
- Employed Git as a version control system to manage source code, enabling collaborative development, change tracking, and code integrity throughout the lifecycle.
- Leveraged automated migration tools and scripts to ensure smooth transitions from .NET Framework to .NET Core, reducing migration risks and ensuring minimal disruption to ongoing operations.
- Partnered with stakeholders to gather business requirements, aligning technical upgrades with organizational needs to maintain system performance and ensure client satisfaction.

Senior Software Engineer, *Synistosa Technologies, LLC*

Jan 2019 – Dec 2020
Islamabad, Pakistan

- Spearheaded the digital transformation of healthcare systems using technologies such as C#, .NET Core MVC, JavaScript, jQuery, and SQL Server, improving operational efficiency and data accessibility.
- Successfully developed and implemented microservices architecture for an Electronic Medical Records (EMR) system, leveraging .NET Core to break down monolithic applications into scalable, independent services.
- Integrated IoT enabled devices such as patient monitoring systems, smart diagnostic tools, and connected medical sensors with the EMR system for real-time data acquisition and analysis.
- Utilized MQTT protocols for device communication and integrated software platforms such as Azure IoT Hub and AWS IoT Core for secure and scalable data ingestion and processing.
- Led the development of a specialized EMR system for the obstetrics and gynecology domain, managing patients' prenatal and postnatal history, doctor examinations, lab tests, and report generation.
- Designed and implemented an inventory management solution for medical facilities, integrating IoT enabled smart shelves and RFID scanners to monitor stock levels and automate reordering processes.
- Adopted a Test Driven Development (TDD) approach to ensure high-quality, scalable, and reliable software solutions, achieving enhanced code coverage and reduced defect rates.
- Effectively utilized Docker for containerization, enabling seamless deployment and scaling of microservices across cloud platforms.
- Led database and architecture design, ensuring seamless integration between IoT devices, EMR systems, and back-end services for a unified data ecosystem.
- Designed, developed, and deployed large scale software solutions with features such as system monitoring, recovery protocols, and performance optimization for high availability.
- Collaborated closely with stakeholders, including healthcare professionals, to gather requirements and ensure the solutions met clinical and operational needs.
- Integrated IoT data streams into Power BI dashboards, providing healthcare administrators with actionable insights for patient care and resource management.

Ultimus Consultant, *Qatar Computer Services*

Jan 2017 – Dec 2018
Doha, Qatar

- Orchestrated the transformation of internal business processes into in-house MIS applications, focusing on robust back-end architecture to optimize data workflows and enable seamless, informed decision-making across the organization.
- Managed and resolved critical incidents, technical issues, and tickets for projects, ensuring operational continuity through rigorous debugging, root-cause analysis, and system enhancements.
- Collaborated with cross-functional teams to gather and refine back-end system requirements for Business Intelligence (BI) integration with Ultimus BPM Suite, leveraging automation and data-driven insights to streamline operations.
- Designed and implemented scalable back-end automation systems using Ultimus BPM Studio 2017 and Asp.net technologies, enabling the optimization of key business processes and supporting advanced data workflows.
- Developed and tested robust workflows within the BI ecosystem, incorporating QA best practices such as automated unit testing, performance testing, and integration testing to ensure data accuracy and system reliability.
- Led a high-performing team of software engineers in back-end development, prioritizing code quality, adherence to best practices, and successful delivery of key projects within tight deadlines.
- Demonstrated expertise in DevOps automation frameworks, employing Docker for containerization and Jenkins for CI/CD pipelines, optimizing back-end deployment processes and ensuring scalability within Kubernetes and AWS environments.

- Contributed to strategic solution design by leading backlog refinement, technical planning, and architecture discussions for BI systems, with a focus on aligning with business objectives while adhering to QA standards for testing and validation.
- Ensured system resilience by implementing robust monitoring, logging, and automated testing pipelines, allowing for proactive detection of issues and reducing downtime during system updates or new feature rollouts.

Senior MIS Engineer, *ZTE*
Sep 2013 – Dec 2016
Islamabad, Pakistan

- Created and designed web application Solutions using Asp.Net MVC, MS SQL Server 2012, Crystal Reports, Telerik Controls, RAD, and accounting and finance-based applications & Power BI Dashboards.
- Supported and modified existing applications and reviewed technical documentation for equipment and server maintenance and repair.
- Developed lotus-based applications and administration, performed database querying, business intelligence reporting and analysis, and maintained and upgraded such systems using .NET technologies.
- Directed software design and development across a multifaceted team to meet client functionality, timeline, and performance needs.
- Experienced with maintaining high-availability production systems in a Cloud environment, including AWS or Azure.
- Created, planned, and designed reporting and business intelligence solutions for finance- and MIS-based web applications.

Senior Software Engineer, *Fincon Services*
Dec 2011 – Sep 2013
Islamabad, Pakistan

- Designed and implemented database architecture based on HL7 V3 Rimbaa-based database, using the latest .NET technologies.
- Developed both web and desktop Electronic Medical Record (EMR) applications, incorporating advanced clinical decision support systems for prenatal and postnatal issues for both mothers and children.
- Trained and guided Community Midwives (CMW) on using mobile phone apps to interact with patients and provide the desired input.
- Planned and executed website development, converting mock-ups into usable web presence with technologies including HTML5, JavaScript, AJAX, Asp.net Web forms/MVC, and T SQL.
- Expertise in Asp.Net 4.0 C#, WP 7.5/8, MS SQL 2008R2, Entity Framework 4.0, LINQ, Silverlight, XML, XAML, HTML5, Reporting, Charting, Scheduling.
- Collaborated with an agile team to ensure proper infrastructure development planning, leading to on-time feature release for 95% of feature requests.

Junior Software Engineer, *ESOLPK*
Aug 2009 – Dec 2011
Islamabad, Pakistan

- Worked as a versatile IT professional with experience as an Asp.Net web developer, DB analyst, deployment engineer, and requirement engineer.
- Designed and maintained the Hotel Management System project for the United States Embassy division, United States Employee Association (USEA) in Islamabad, integrating with POS and Microsoft GP plain.
- Contributed to key projects, including SPO Phase 1, SPO Phase 2, and HMS for USEA.

🧩 Strength

An experienced Microsoft .NET professional with work experience
My proficiency extends to resolving critical build issues and offering viable solutions to code-related challenges. Leveraging both the latest and legacy .NET technologies, I have played a pivotal role in digitally transforming multiple organizations.

Quick Learner
I possess exceptional learning agility and can quickly comprehend new scripts and technologies, enabling me to develop innovative solutions with enhanced functionality and unique architecture.

Experience with Team Leading

As a leader in the agile model, I spearheaded teams at Fincon, Synistosa, and QCS, leveraging my expertise to effectively set tasks and timelines in close consultation with clients and managers. My responsibility encompassed ensuring the successful execution of these tasks, all while adhering to the principles of the agile model.

Automation everywhere!

As an individual with a strong passion for research, I constantly explore innovative ways to automate various tasks, eschewing conventional and manual approaches. My unyielding commitment to streamlining processes and optimizing efficiency drives me to seek out novel solutions continually.

🎓 Education

Masters of Science in Software Engineering, *University of Engineering & Technology*

Aug 2011 – Aug 2015
Taxila, Pakistan

Bachelors of Science in Software Engineering, *University of Engineering & Technology*

Aug 2005 – Aug 2009
Taxila, Pakistan

🧠 Skills

Front-end
ReactJS, Bootstrap, JavaScript, TypeScript, ES6,HTML5/CSS, AJAX,

Back-end
C#, ASP.NET MVC CORE, Web API, WCF, Entity Framework, LINQ .NET Core, Microservices, Python, Azure functions, Power BI

Databases
SQL Server, Oracle, MySQL, PostgreSQL, MongoDB

Additional Skills
CI/CD, DevOps, Cloud technologies (AWS, Azure), Agile methodologies, Docker, TDD, Selenium, DevOps, PowerBI, Snowflake, JIRA, Confluence, Project Management

📖 Publications

Development of Academic Attendance Monitoring System Using Fingerprint Identification, *IJCSNS International Journal of Computer Science and Network Security* ⧉

May 2009

Arash K, Tabassam N, Azhar ud Din & Saim P. (2009). Development of Academic Attendance Monitoring System Using Fingerprint Identification. International Journal of Computer Science and Network Security, 9(5), 164-168.