Matin Maleki

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Objective

Technology professional with **+17 Years** of experience spanning software development. Candidate PhD and graduated with a Master's in Software Engineering. Skilled in various phases of the software development lifecycle (SDLC) from **requirement gathering**, **analysis, modeling,** and **conceptual design** to **prototyping, developing, deploying,** and **automating test** applications for launch. Leading and building cross-functional teams and hands-on software development and research for adopting new solutions and technologies in **multi-tier, clean architecture**, **serverless patterns,** and **microservice-based** architectures. Author of the book "Developers Ultimate Guide: Linux Bash Scripting: Linux Basics to Advanced Topics and Bash Scripting in 12 Weeks"

Skills & Abilities (years of experience)

Modeling: UML (12) RUP (5) Enterprise Architect (4) Papyrus (1) Lucid Charts (5)
Core Dev: C# (17) JavaScript (10) C++ (6) Python (4) Java (2) .Net (17) REST APIs (10) Node.js (4)
Back-End: MS SQL (14) Azure SQL (8) Postgres (6) Timescale DB (6) MongoDB (2)
Front-End: ASP.Net (10) MVC.Net (8) JavaScript (8) Silverlight (3) WPF (8) HTML (14) CSS (14)
Angular JS: (4) ReactJS (4) Bootstrap (8) jQuery (8)
Architecture: N-tier (14), Clean Architecture (6) Microservices (5) MVVM (7) MVC (10)
Prototyping: Adobe toolset (8) Figma (2)
Platforms: Windows (14) Linux (8) Mac (6) Android (2) iOS (2) NVIDIA Jetson (1) Raspberry PI (6)
Azure Kinect (2) ROS (1)
AI & Processing: OpenCV (10) TensorFlow(2) PyTorch(2) Scikit-Image (2) YOLO (2) Stable Diffusion (2)
Cloud Services: MS Azure (6), AWS (1), Google Cloud (1)
CI/CD and DevOps: Azure DevOps (6)
Source Control: Team Foundation Server (10), GitHub (10), Azure DevOps (6)

Experience

WOODGROVE TECHNOLOGIES TORONTO **2020 – 2024**

SOFTWARE DEVELOPMENT TEAM LEAD / MANAGER *(2021 – 2024)*

Projects AwaRE, PCS and POP:

- Fuzzy Logic Control Systems: Led the design and implementation of Azure cloud architectures, emphasizing scalability, resilience, and alignment with modern DevOps practices. Designed and integrated fuzzy logic components to enable flexible decision-making under changing conditions and incomplete data.
- Cloud & DevOps Integration: Established microservices and continuous delivery workflows.
- Architected cloud-based solutions on Azure to enhance scalability and reliability. Architectural Governance & Best Practices Defined architectural standards, design patterns, and coding guidelines.
- Microservices & Computer Vision: Built a microservices-based IP camera feature extraction framework. Developed a C++ computer vision module for analyzing images and videos across various stages of an industrial process.
- Scalable Time-Series Database: Planned and implemented a specialized database solution to capture thousands of data points per second.
- Ensured smooth interaction between control systems and real-time process automation.
- Prioritized high-speed retrieval and storage to support real-time analytics.
- Conducted regular reviews to maintain system performance, security, and compliance.
- Strategic Technology Planning: Researched emerging technologies and evaluated potential benefits for long-term architectural evolution. Provided recommendations that balanced innovation with system stability and business needs.

SENIOR SOFTWARE DEVELOPER *(2020-2021)*

Project AwaRE:

- Develop Real-Time System Monitoring Schematics and Time-Series Data Visualization Dashboards
- Architect Real-Time Data Pipelines: Design and implement scalable data ingestion processes for real-time monitoring, ensuring system resilience and fault tolerance across distributed environments.

- Implement Alerting & Notification Strategies: Configure triggers and alert thresholds for critical metrics, ensuring timely incident response and minimizing system downtime.
- Optimize Performance & Scalability: Evaluate and refine system performance by conducting stress tests, tuning data pipelines, and optimizing dashboard rendering to handle large-scale traffic and data volume.
- Design Interactive Dashboards: Develop intuitive, user-focused dashboards for time-series data, leveraging modern UI frameworks and analytics tools to present complex metrics in an actionable format.
- Maintain Industry Best Practices: Stay current with emerging tools and technologies in real-time monitoring and data visualization, and apply best practices to enhance reliability, security, and compliance.

Technical Environment: Postgres, Timescale DB, OPC Client App, Net Core, Clean Architecture.
.Net Core 3.1, C#, REST APIs, Swagger Endpoints.

DAC GROUP TORONTO **2018– 2020**
APPLICATION DEVELOPER

Project **Swoop** Cloud-Based Data Aggregation:
- Cloud-Based Data Aggregation: Designed and developed a system to collect, process, and unify public data from multiple sources in real-time. Applied a modular, cloud-native architecture to simplify data ingestion, validation, and enrichment.
- Local Presence Management: Built a centralized platform to manage location-specific information (e.g., addresses, contact details), ensuring accurate, up-to-date records for each locale.
- Integrated geolocation services and mapping APIs to automatically update and verify location data.
- Database Migration to Distributed Azure SQL: Transitioned from a single, centralized MongoDB instance to a distributed Azure SQL Database architecture. Achieved higher performance and reliability by leveraging sharding, replication, and built-in Azure services for fault tolerance.
  Implemented strategies to handle schema migrations, data consistency, and concurrency during the transition.
- Scalable & Secure Implementation: Employed microservices and containerization for flexible deployment and easier maintenance. Established CI/CD pipelines with Azure DevOps to automate builds, testing, and releases. Incorporated Azure security best practices (Azure AD, role-based access control, encryption at rest) to safeguard sensitive data.
- Performance Monitoring & Optimization: Utilized Azure Monitor and Application Insights for logging, real-time metrics, and alerts, enabling proactive troubleshooting.
  Fine-tuned queries and indexing strategies in Azure SQL to improve read/write throughput and reduce latency.
- Business Impact: Enabled faster access to accurate local presence data, driving better customer experiences and higher operational efficiency. Positioned the organization for future expansion through a robust, cloud-native architecture that scales on demand.

Project **LDM**: Design JSON online validation tool using microservices:

- Establish validation logic for verifying data accuracy (e.g., format checks, geolocation constraints, duplicates).
- Design workflows and pipelines to handle incoming data in real time, ensuring minimal latency.
- Develop unit, integration, and end-to-end tests for each validation rule to ensure reliable outcomes.
- Simulate edge cases (e.g., incomplete addresses, multiple languages) to verify the tool's resilience and accuracy.

Technical Environment: .Net Core 3.1, Azure Service Bus, Azure Functions, C#, App Insight, REST APIs, Swagger Endpoints, Azure Elastic Pools, Clean Architecture.

Technical Environment: .Net Core 3.1, Azure Service Bus, Azure Functions, C#, Dapper, App Insight, REST APIs, Swagger Endpoints, Azure Elastic Pools, Distributed Database Design.

ERICSSON AND CONCORDIA UNIVERSITY MAGIC LAB **2017 – 2018**
RESEARCH ASSISTANT
- Filing a patent project based on 5G and Cloud services.
- Design systems with built-in redundancy (e.g., multi-region deployments, load balancing) and establish automatic failover processes to seamlessly shift traffic when a node or data center experiences issues.
- Leverage real-time observability tools and analytics to track critical metrics, promptly detect anomalies, and notify the right teams for immediate incident response—minimizing unplanned downtime.

- Schedule regular system checks, conduct failover drills, and maintain up-to-date disaster recovery plans to ensure quick restoration of services. This practice underpins five-nines availability by mitigating risks before they escalate.

SABAIDEA.COM **2014 – 2016**
SOFTWARE UI/UX ARCHITECT

Leading changes from the creative team to apply on the primary presentation layer of assets for Mobile, Web, and TV for startup ideas.

- Project **Aparat.com**: video sharing and equivalent to youtube.com in Iran. Ranked 2 (after Google) in Iran based on Alexa ranking for user traffic.
- Project **Aparat Kids**: cartoons and video sharing specifically designed for kids.
- Project **Aparat.com/Ojoobeha**: Got talent based on uploading videos to the Aparat website.
- Project **Lenzor.com**: Leading preparation of an iPhone photo-sharing platform.

TAZARV.COM **2009 – 2012**
SOFTWARE DEVELOPER/ARCHITECT

Led changes in design and built the primary user interfaces for Windows and web applications to apply creative teams' ideas and wrote developers architectural documents to construct the whole Tazarv BPM suite as a Business Process Management System (BPMS).

- Form Designer and Workflow Generator: WPF Windows-based application to create drag and drop user-generated forms.
- Task Manager: Design architecture of Silverlight modular web application to manage forms in the processes.

Technical Environment: Silverlight, WPF, WCF, MSSQL, RIA Services, MVVM, and n-tier architecture. (Exhibition demo link https://vimeo.com/58024978)

PAYVAND SOFTWARE GROUP **2006 - 2009**
WEB DEVELOPER

Projects: **Geo ALBA** – Geoscience information data website for ALBA group
Geo DMS – Geoscience digitalization and modeling system.
Id-Ir – Science and industry magazine website.
Eco Geo Databases – Eco Group Geo science database website
NGDIR – National Geoscience Database of Iran.
Payvand Group – Payvand Software Group
Geo Journal – Magazine

Technical Environment: Classic ASP, ASP.Net, MVC, MSSQL, N-tier architecture, Team Foundation Server.

Other Project

- Project **Jaaneman.ir** : Leading and budget management to deliver a Healthcare personal system on mobile phones.
  Technical Environment: ASP.Net, C#, Html5, jQuery, Android App, TFS.

- Project **UniChess.ir** : Leading and budget management of a game project to hold a chess competition.
  Technical Environment: MVC.Net, C#, jQuery, Bootstrap, Rest APIs, SignalR, MS SQL, TFS.
  Project **Shahmat.ir**: Founder of a Startup online web chess game with the possibility to keep the history of all games of the user for further review.
  Technical Environment: WCF, C#, Silverlight, MSSQL, Xaml.

- Project **mbaco.ir**: Led team and budget to build a web application for dynamic measurements, and managed an automated monthly report on industrial water treatment of petrochemical plants.
  Technical Environment: MVC.Net, C#, jQuery, Bootstrap, Rest APIs.

- Project **elmifarhangi.ir** : Development of dynamic website management for the book publishers.
  Technical Environment: ASP.Net, C#, blogengine.Net, Html, CSS.

- Project **4thOperator** : Windows mobile application to track, record, and report contractors in the municipality of Ahwaz city.
  Technical Environment: Windows Phone 6, C#, Xaml, Bootstrap, Rest APIs.

Teaching Experience

· Seneca College | 2022 Fall - ULI 101 (70 Students)
· Seneca College | 2023 Winter – Web322 (70 Students)
· Seneca College | 2023 Fall – Web524 (35 students)
· Seneca College | 2024 Winter – Web524 (35 students)
· Seneca College | 2024 Fall – SFT and APS (150 students)

Teaching Assistant bachelor's degree Students with Dr. Saeed Shiry Ghidary – 2010-11:
· Programming Languages in C
· Advanced Programming Language in C#

Teaching Assistant bachelor's degree Students with Dr. Mahdi Pakdaman - 2011:
· Artificial Intelligence Course

Education

DOCTOR OF PHILOSOPHY | 2017-2018 | CONCORDIA, MONTREAL, CANADA
· Major: Electrical and Computer Engineering
· Subject: Cloud Services and 5G Mobile network slices.
· Related coursework: High available architectures for cloud services and model-driven software engineering.

MASTER OF ENGINEERING | 2017 | QAZVIN IAU, IRAN
· Major: Software Engineering
· Subject: Context-aware application design.
· Related coursework: Customization and Personalization Algorithms.

BACHELOR OF ENGINEERING | 2013 | TEHRAN, IRAN
· Major: Software Engineering
· Subject: Fraud Detection in Online Games
· Related coursework: Asynchronous Development and Architecture.

Volunteer Works

Usability Day Public Speaking in Iran Ministry of Communication and Telecom.
"Emergence of Cargo Cult: Imitation in design and useless products"

Robotic Competitions:
Humanoid Robot Team Member International Competition Brazil 2014
Humanoid robot team member national competition Iran Open 2013
Deminer Autonomous Team Leader 2010 - AUT Cup – Ranked Top 8
Deminer Autonomous Team Leader 2011 - Iran Open - Ranked Top 8
Deminer Autonomous Team Leader 2012 - Iran Open - Ranked Top 8

Robotics Title of Research:
"Design and Constructing Autonomous Deminer Robot with Navigation and Obstacle Avoidance Algorithm Operating in Unknown Maze-Type Environments"

Technical Committee of Robotic Competition:
Technical Committee AUTCup Deminer Manual
Technical Committee Iran Open 2010 - Deminer Autonomous - E Referee
Technical Committee Iran Open 2011 - Deminer Manual
Technical Committee Iran Open 2012 - Deminer Manual

Certificates:

Master CIW web designer 2006.
SQL server Implementation and Maintenance 2008.
Interaction Design Foundation: Human-Computer Interaction 2015.
Interaction Design Foundation: Gamification-Creating Addictive User Experiences 2015.

Microsoft Certified:
Azure AI Fundamentals Microsoft 2022