

David Bahadori  
Shiraz, Fars, Iran  
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Personal Website: dbahadori.github.io

DOB: 5<sup>th</sup> October 1986  
Nationality: Iranian  
Marital status: Single  
Military Service: Completed

# David Bahadori

## Technical CV

### PROFESSIONAL PROFILE

As a multi-skilled technical person with several years of background knowledge in SOA, I have done several projects in related to designing and developing software application under different platforms, technologies, and frameworks such as ASP.Net MVC, play REST API, SOAP Web Service, FreeSWITCH, Elastix, and etc. In my roles I have built up both my knowledge and experience of software development and architecture.

### COMPETENCIES

- Deep knowledge of SOA concepts.
- Long time experience in developing SOAP, REST and message based services.
- Knowledge about EIP patterns and related mechanisms in WSO2 ESB.
- Knowledge of software architecture documentation (V&B framework).
- Good skill in research and technology benchmarking.
- Modeling with UML 2.0, Rational Rose & EA.
- Experience of Play and ASP MVC web development frameworks.
- Experience of web scrapping and automation using Selenium framework
- Experience of some VOIP server and transactional IVR.
- Good presentation skill.
- Knowledge of document plagiarism detection.
- Knowledge of I4.0 Maturity Model Development
- Knowledge of Machine Learning, particularly Deep Reinforcement Learning
- Knowledge of Domain-driven design (DDD)

### PROFESSIONAL EXPERIENCE

**Best Group Company**, Canada, 2021

#### Key achievements

- Implemented a web automation application for Multi-Step booking System using **Selenium framework** and **Python** language.

#### Project link on Github

- <https://github.com/dbahadori/DriverTestAutomation>

**Research & Development- IRISA (contractor of Mobarakeh Steel Co.)**, Isfahan, August 2018 – 2019

#### Key achievements

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- A general survey about available Industry 4.0 and Digital Transformation **maturity models**
- A benchmark comparison between available Industry 4.0 maturity models
- A categorization of Industry 4.0 Dimensions
- Initialize and configure **WSO2 IoT Server**

#### Key responsibilities

- Developing a Maturity Model and Road Map for Digital Transformation (Smartization) of Mobarake Steel Company (MSC)
- Implementing industry 4.0 principles in one area of MSC company as a pilot
- Developing an IoT architectural framework in order to implement an **IoT middleware** for realizing the industry 4.0 technological principles in pilot area

#### REST API and Client Application Developer – Rayan Ham-Afza Company, Tehran, May 2017 – March 2018

##### Key achievements

- Implemented an e-payment service integrated with more than 10 banks with different security policies and mechanisms using **dependency injection** and **factory patterns** (Java and play framework).
- Implemented API configuration services in order to removing repetitive configuration task in DB side (Java and **play framework**).
- Implemented customized controls as well as a theme manager in order to reduce programming effort by customizing **Material Skin (C# .NET)**.
- Prevented **SQL injection** attacks by parameterizing queries, which are used in different layers of application and functions as well as stored procedures in Oracle DB (**Java** and **Struts framework**).

##### Key responsibilities

- Customizing the **Material Skin Controls** for **.Net WinForms** in order to use in client side application.
- Migrating proprietary stock brokers and investment funds software from web based application (Struts framework) to service based application, REST API (**play framework**).

#### Research & Development – ARKA Company (as Project), Tehran, September 2016 – December 2016

##### Key achievements

- **Benchmarked** the Open Source Web Development Frameworks for .NET and selected suitable technologies and frameworks as well as implemented some scenarios using the proposed frameworks (**ServiceStack**, **NLog** and **FluentValidation**).
- Initialized the **Mono** and deployed the operational WCF services on Apache Server, running on a CentOS.
- Implemented a C# Client App for concurrent monitoring of running services by taking advantage of **Zabbix server**.

##### Key responsibilities

- Provide a framework for development team that comprised of open source framework and meet technical requirements of project such as logging, exception handling, changeability and validation.

#### Analyst and Designer – Tavana Resaneh Company (as Project), Tehran, September 2015 – November 2015

##### Key responsibilities

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- Analysis and design a web based system that was comprised of server and client side applications for online burger shopping using **UML 2.0**.

#### **Software Developer – Tavana Group, Tehran, January 2014 – May 2015**

##### **Key achievements**

- Implemented a web based system for automatic plagiarism detection using Lucene.Net and **ASP.Net MCV**.
- Implemented a workflow designer for proprietary USSD&SMS gateway using **JavaScript** and **jointjs** library.
- Implemented an IVR Application for registering users in logistic system using **Elastix** by taking advantage of Asterisk AGI.
- Initialized and configured **FreeSWITCH VOIP Server** and Implemented **IVR** application on it.
- Implemented performance and stress test of installed FreeSWITCH VOIP Server using **Sipp** software.

##### **Key responsibilities**

- Developing SOAP based web services for proprietary USSD&SMS gateway using Axis2.
- Research, select and configure a scalable open source VOIP Server.

##### **Project link on Github**

- Document Similarity: <https://github.com/dbahadori/DocumentSimilarity>

#### **KEY TECHNICAL SKILLS (moderate proficiency)**

- Modeling Languages:
  - UML
- Programming Languages:
  - Java
  - C#
  - Python
- Dot Net Technologies
  - Microsoft ASP.Net, MVC, and WPF
  - Lucene.Net
  - Microsoft SQL Server Database
- SOA-based Technologies
  - SOAP/RESTfull Web Service (strong understanding)
  - WSO2 ESB (strong understanding)
  - WSO2 Repository
- Web Technologies
  - Selenium Framework (strong understanding)
  - Play Framework
  - Java Script
- Elastix and Freeswitch Voip Server
- Version Control Systems
  - Git
  - SVN

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## OTHER TECHNICAL SKILLS (familiar with them)

- Messaging Platform
  - RabbitMQ, Kafka, WSO2 Event Broker
- Microservice Technologies
  - Istio service mesh, Kubernetes, Docker
- Microservice Design Patterns
  - Saga, CQRS, Event sourcing, Circuit Breaker
- Spring Projects
  - Spring Boot, Spring Security, Spring Cloud Stream
- CentOS, Ubuntu
- Software Architecture Documentation (V&B framework, 4+1 framework)

## RESEARCH INTEREST

- Self-Adaptive Software Systems with taking the advantages of SOA, RL, and MAS
- Service Oriented Architecture (SOA System Evolution, Self-\* SOA Systems, Service Versioning)
- Service Oriented Middleware (Service Discovery, Publishing, Composition, Orchestration and choreography, QoS, Adaptive Enterprise Service Bus)
- Event-driven SOA (Asynchronies Service Orchestration and Choreography)
- Large Scale Software Architecture (Architectural Design & Style, View based Documentation, Adaptation)
- Deep Reinforcement Learning
- Multi-Agent Systems

## TEACHING AND PRESENTATION EXPERIENCE

- **Mobarakeh Steel Company (MSC)** 2019  
Lecturing "Introduction of Industry 4.0 Dimensions and Maturity Models"
- **Hormozgan Steel Company (HOSCO)** 2019  
Lecturing "Introduction of Industry 4.0 Dimensions and Core Technologies"
- **ICT Research Institute (IST 2018 Symposium)** 2018  
Oral presentation, "T-DSCM: A Three-Dimensional Framework for Service Change Management in SOA Environments", *ICT Research Institute*
- **Telecommunication Company of Tehran** 2014  
Lecturing "Introduction to SOA based Integration and related Technologies: ESB, XML, XSD, SOAP and Web Service"
- **Computer Engineering Scientific Association of Birjand University** 2009  
Lecturing "Professional ASP.Net 2.0: Web part, Membership and Security, etc."

## PUBLICATION

- D. Bahadori and A. A. Barforoush, "T-DSCM: A Three-Dimensional Framework for Service Change Management in SOA Environments," in 2018 9th International Symposium on Telecommunications (IST), 2018, pp. 630–636.

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## PERSONAL SKILLS

- Motivated
- Agile and Self-Learner
- Communication
- Team work
- Creativity
- Analytical skills
- Time management

## FORMAL EDUCATION

**Amirkabir University of Technology (Tehran Polytechnic), Iran**, September 2011 – January 2014

MSc, Information Technology Engineering.

**University of Birjand, Iran**, September 2008 – September 2010

BSc, Computer Engineering (Software).

**Shahid Chamran University of Ahvaz (Jundi Shapur), Iran**, January 2006 – January 2008

ASc, Computer Software.

## FURTHER EDUCATION

### **Machine Learning Course**

Stanford University, Coursera MOOC by Andrew Ng, 2020

### **Reinforcement Learning Specialization**

University of Alberta, Coursera MOOC by Alberta Machine Intelligence Institute, 2021

- Four course specialization covered Fundamentals of Reinforcement Learning, Sample-based Learning Methods, Prediction and Control with Function Approximation, and A Complete Reinforcement Learning System (Capstone) using python libraries.