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## Personal information

Name: Vahid Asbaghi  
Birth Date: 25.01.1985  
Birth Place: Tehran, Iran  
Marital Status: Married



## Education

### M.Sc. in Artificial Intelligence

Department of Electrical Engineering, Khajeh Nasir Toosi University of Technology (KNTU) 

09/2011 – 02/2014

Tehran, Iran (GPA: 16.18/20)

#### Thesis


- *Combined Lens System Design with 17-25mm Focal Length and Near Unity F-Number using Intelligent Methods.* (GPA: 18.3/20)

Supervisor: Prof. H. Abrishami Moghaddam 

#### Major Courses

- **Digital Image Processing, Digital Signal Processing, Machine Vision, Machine Learning, Soft Computing, Statistical Pattern Recognition, Speech Recognition.**

### B.Sc. in Condensed Matter Physics

Department of Physics, Shahid Beheshti University (SBU) 

09/2004 – 07/2010

Tehran, Iran (GPA: 13.02/20)

#### Project

- *Group theory and statistical analysis of hexagonal crystals*

#### Major Courses

- **Fundamentals of Computer & Programming, Database Fundamentals, Algorithms Design & Implementation, Statistical Mechanics, Physics Mathematics 1-2-3, General Mathematics 1-2, Differential Equations.**

## Publication

V. Asbaghi, H. Abrishami Moghaddam, "Automatic Design of Optical Systems Using a Real-Coded and Variable-Length Genetic Algorithm", Under Review, *Optical Engineering*, (2018).

## Academic Projects

### Subject

- Implementing the article: "An image contrast enhancement method based on genetic algorithm (2010)"
- Implementing the article: "Locally edge-adapted distance for image interpolation based on genetic fuzzy system (2010)"
- Implementing the article: "Pattern recognition using multilayer neural-genetic algorithm (2003)"
- Implementing the article: "Color Pixel Classification Using Genetic Fuzzy System: Case Study on Earth Surface Classification (2010)"
- Implementing the article: "A new grouping genetic algorithm for clustering problems (2012)"

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**Work  
Experience**

## Software Designer & Developer

MAPNA , MECO , MAPCS 

*Best employee of the year award (2018-2019)*

*01/2017-Present*

*Alborz, Iran*

*MAPNA Electric and Control, Engineering and Manufacturing Company (MECO)*

*MAPNA Automation and Process Control System (MAPCS) is the state of the art MECO FCS/DCS system which is developed on basis of a 100% standard architecture based on Fieldbus technology and is able to control all kinds of industrial processes with any degree of complexity.*

### Tasks/Experiences

- **Developing and maintaining the DCS engineering software (MAPIDE) that is developed using C# windows forms technology.**
- **Developing the 64-bit MAPIDE, based on Service Oriented Architecture (SOA) using WCF technology. Involved in proposing the architecture, designing the system, and implementing the 64-bit MAPIDE.**
- **Scrum Master**
- **Agile Coach**
- **Administrating the network of the MAPCS scalability test room**

## Software Designer & Developer

SHEEDKADEH R&D Center 

*09/2014 – 01/2017*

*Alborz/Iran*

*SHEEDKADEH is the R&D center of the Sheed Afzar Rayaneh company. The main product of the company is the best anti-virus software of Iran which is named Sheed Anti-Virus.*

### Tasks/Experiences

- **Contributing to design and select the architecture of the product. Choosing WPF technology and MVVM light toolkit to implement MVVM pattern which is the main architecture style of the projects of the user side software of the Anti-Virus.**
- **Contributing to design the whole architecture of the anti-virus system. Including a complicated architecture including, back-end (using ASP.Net Web APIs technology), windows front-end (consist of a user side application based on WPF technology and MVVM architectural pattern, a windows filter driver, a C++ based windows service to load the AV engines and to communicate with filter driver, and a C# windows service), and web front-end components.**
- **Analyzing the anti-virus system. Contributing to extract the main features of the anti-virus and to sketch Component Diagrams, Activity-Diagrams, and the other UML diagrams of the software. Contributing to analyze the User Stories, Product Backlogs, and Tasks.**
- **Developing main windows service of the anti-virus using C#.**
- **Developing anti-virus filter driver using C programming language by a broad usage of the windows kernel API calls.**
- **Developing C++ windows service to control the anti-virus engine and its communication with the filter driver and the anti-virus's user side.**
- **Administrating the local network of the SHEEDKADEH, managing the TFS, involved in setting up the backup service of the server, domain controller, DNS, DHCP, group policy and etc.**
- **Setting up modem, routers, wired and wireless devices.**
- **Contributing to design the database of the system.**

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**Freelance  
Work  
Experience**

## Web Application Development

*01/2017 – 01/2018*

- **designing a customer ordered web application using Asp.Net MVC technology. Involved in SQL database, Unity IOC, HTML, JQuery, Ajax, Bootstrap, JQuery-UI, JavaScript, and etc. technologies; in addition, analyzing the customer specifications, designing and implementing whole web application.**

### Pages

- **Main Page **
- **View all/ Add/ Update/ Delete data (tree view) **
- **View all/ Status (tree view) **
- **Table of all data/ Update **

## Web Application Development

01/2018 – 04/2018

- designing my own web application, including front-end and back-end. Involved in SQL database, MVC pattern, EntityFramework CodeFirst, Unity IOC-Container, HTML, JQuery, Ajax, Bootstrap, JQuery-UI, and etc. technologies.

## Personal R&D Projects

### Improvement of Authentication Methods Based on the Eyes Biometric Features

2013

- A method to detect human identity using eye biometric features was proposed. At this research project, I used eye's iris features to detect identity. Some good edge detection and feature extraction methods have been used in this project.

### Separating Point Sets Algorithm in Polygonal Environments Using Mono-Chromic Islands

2013

- At this project to determine the biggest possible mono-chromic island among a random set of two color points in two dimensional space, a new genetic algorithm approach was presented. The Separating Point Sets problem is one of the most challenging ones in computational geometry.

## Certificates

### Professional Scrum Master

Rayzan Samaneh Gostar, Tehran

2017

### Enterprise Systems Architecture

MECO, Alborz

2017

### Service Oriented Architecture

TahlilDadeh, Tehran

2018

### Test Driven Development (TDD)/ Behavioral Driven Design (BDD)

MECO, Alborz

2019

## Skills

### Artificial Intelligence

#### Image and Signal Processing



#### AI Algorithms



#### Machine Vision



#### Artificial Neural Network (ANN)



#### MATLAB: Fuzzy Learning



#### Datamining



#### Evolutionary Algorithms



#### Machine Learning



#### Genetic Algorithms



### Windows Development Technologies

#### Filter Driver/Windows APIs



#### WPF (MVVM Architecture)



#### Windows Forms



### Web

#### ASP.NET Web Forms



#### ASP.NET WebAPI



#### Web Security



#### ASP.NET MVC



#### JQuery/Ajax



#### CSS



#### Node.js



#### Bootstrap



### Programming Languages

#### C#



#### C/C++



#### JavaScript



#### HTML



#### Python



#### Action Script



#### MATLAB



### Software Engineering

#### Agile Methodology



#### Scrum



#### Extreme Programming (XP)



#### Object Oriented



#### Design Patterns



#### System Architecture



#### Domain Driven Design



#### SOLID



#### TDD/BDD



#### UML



#### SOA



## Network

Windows Server 2012 & 2008



DHCP/DNS/Domain  
Controller/Active  
Directory/Group Policy



## Tools

TFS



Visual Studio



Anaconda Python



Microsoft Office



Photoshop



Zemax (Optical Engineering  
Software)



Git



Vs Code



Spyder Python



Microsoft Visio



Corel Draw



Jira



Resharper



Microsoft Project



## Database

SQL Query



Entity framework



SQL Server



Database RDBMS Design



ADO.Net



MongoDB



Microsoft Access



## Other

Algorithm & Problem Solving



Optical Engineering



Research



Team Work



## Language Skills

**LANGUAGE**

English

Persian

**READING**

Upper intermediate

Native

**SPEAKING**

Upper intermediate

Native

**LISTENING**

Upper intermediate

Native

**WRITING**

Upper intermediate

Native

## Awards

**Best employee of the year 1397 award (2018-2019)**

- MAPNA Electric and Control, Engineering and Manufacturing Company (MECO)