

RESEARCH INTERESTS

- Surgical Robotics
- Human Computer Interaction
- Medical Software Designing and Development
- Medical Image and Information Processing

EDUCATION

2010-2012 **M. Sc. in Biomedical Computing**, Technical University of Munich, Munich, Germany
(Ranked 1st in Germany | Top 50 in the world)

2006-2010 **B. Eng. in Information Technology**, Institute for Advanced Studies in Basic Sciences (IASBS), Iran

PROFESSIONAL EXPERIENCES

The Sheikh Zayed Institute for Pediatric Surgical Innovation, Washington, DC (11/2012 - Present) | [Website](#)

Software Architect and System Engineer

- Integrated and tele-operated system for wireless Robotic Natural Orifice Transluminal Endoscopic Surgery (R-NOTES)

Infineon Technologies AG, Munich, Germany (04/2012 – 10/2012) | [Website](#)

Software Architect and Engineer

- Intensive framework for communication to microcontrollers as a USB communication device or HID

Discussion Center, Munich, Germany (04/2011 – 04/2012) | [Youtube](#)

Senior Software Developer

- A web framework to collect, store and visualize data.

Technical University of Munich (TUM), Munich, Germany (10/2010 – 02/2012) | [Website](#)

Software Developer

- OR-Use platform, a distributed platform to collect and manage usability data in context of multi-center studies in the Operating Rooms.

Medal Electronics Engineering Ltd, Tehran, Iran (01/2007 – 09/2010) | [Website](#)

Software Developer and Medical Informatics Specialist

- Acted as developer of medical imaging software and specialist in customization, installation and training of PACS and other medical solutions and hardwares

HONORS AND AWARDS

Your Idea Pays (YIP) Program, Infineon Technologies AG, Munich, Germany, 2013

Foreign Student Stipendium, Technical University of Munich, Munich, Germany, 2011 & 2012

Silver Medal in International Trade Fair of Innovations, Nuremberg, Germany, 2011

Entrepreneurship certificate in the Medical Imaging, TUM, Munich, Germany, 2011

Moghaddam Top Student Scholarship, IASBS, Zanjan, Iran, 2009 & 2010

SCIENTIFIC ACTIVITIES & PUBLICATION

- Integrated and tele-operated system for wireless Robotic Natural Orifice Transluminal Endoscopic Surgery (R-NOTES), *Computer Assisted Radiology and Surgery (CARS)*, Heidelberg, Germany, 2013.
 - Towards systematic usability evaluations for the OR: an introduction to OR-Use framework, *Information Processing in Computer Assisted Interventions (IPCAI)*, Pisa, Italy, 2012.
 - Face detection based on template matching with genetic algorithm in non-heterogeneous images, 2010
 - Automated detection and characterization of atherosclerotic Plaque composition in IVUS images, 2010.
 - Non Invasive Histology of Atherosclerotic Plaque (NIHAP) application, 2010.
 - Analysis of Health Integrated Information System (HIIS), 2008.
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Skills

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|-----------------------------|----------------------|------------------------------|
| • Software Development | • Database Designing | • Testing & Debugging |
| • Object Oriented Designing | • GUI Designing | • Technical Documentation |
| • Systems Engineering | • Usability Testing | • Human Computer Interaction |
| • Ajax Frameworks | • Robotics Software | • Embedded System |

TECHNICAL PROFICIENCY

- **Programming/Scripting/Database:** C/C++/C#, .NET Framework(ASP, WCF, WPF, Windows Forms), Silverlight, Java EE(JSP, Swing, Servlet), JavaScript, HTML, XML, LINQ, SQL, MySQL, MS Access and Qt
- **IDE:** Microsoft Visual Studio, Eclipse, Netbeans, Microsoft SQL Server Management Studio
- **Robotics and electronics:** KUKA KRL, ROS, TI ZStack, IAR Workbench for Embedded System
- **Computer Graphics:** Visualization Toolkit (VTK), Insight Registration and Segmentation Toolkit (ITK) and Medical Imaging Toolkit (MITK), and DICOM Standard
- **Networking and Communication:** Wireless Networking, Serial Port, CAN, Windows 2003 and XP Networking (Installing, configuring and administrating services), Apache and IIS server implementation
- **Medical Software:** alma (Dedicated Image Processing Workstations), 3Vision (3D Reconstruction Software), PACSPPLUS (PACS Software)
- **Numerical Computing Environment:** MATLAB

ADVANCED COURSES

- **Medical**
Advanced Computer Aided Medical Procedures, Computer Aided Trauma Surgery, Medical Information Processing, Machine Learning Methods for Computer Vision Applications, Medical Imaging Entrepreneurship, Medical Imaging Techniques.
- **Computer**
Advanced Software Engineering, Advanced Computer Vision, Computer Graphics, Robotic Geometry, Advanced Artificial Intelligence, Advanced Information Technology Engineering, Advanced Multimedia, Advanced Computer Programming.

PATENTS

- 2010 Industrial Automation Solution for Geotechnical Devices and Dependants - Patent in Iran (No. 64026).
2008 Uncoiled Rotor Electrical Motors - Patent in Iran (No. 51279).

LANGUAGES

- Persian (Native), English (Fluent), German (Beginner)

ACTIVITIES AND HOBBIES

- Chess, Football, Poem, literature and Calligraphy
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REFERENCES

References available upon request

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