



Soroosh Mortezaipoor



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About me: I have always been obsessed with science, in combination with skills, techniques, methods, and processes that all together form something we know as technology. I believe that the long path to a perfect world should be traversed with small, simple, yet thoughtfully directed steps, that each makes the world a better place for everyone to live. In many years of working with wonderful teams of people in various roles ranging from an intern to a CTO, co-founder, and even a mentor for young startups, all along with gaining numerous pieces of experience, I have always tried to follow this concept to make the world a better place with each step. My principles for work-life are simple: creativity, honesty, commitment, and willingness to go beyond current capacities and push the boundaries.

● WORK EXPERIENCE

05/2020 – CURRENT – Vienna, Austria

FWF PROJECT ASSISTANT - PH.D. CANDIDATE – TU WIEN - VIENNA UNIVERSITY OF TECHNOLOGY

Working as a Ph.D. researcher on the SFB project "Robotics; Large-Scale Haptic Interactions in Virtual Reality, Based on a Mobile Robotic Platform". The project "SFB Advanced Computational Design" brings a large number of scientists together from various research groups from Vienna University of Technology (TU Wien), Graz University of Technology (TU Graz), and the University of Innsbruck. The main questions it is trying to answer are how to advance design tools and processes through multi- and interdisciplinary basic research in digital architecture, integrated building design, computer graphics and virtual reality, discrete and applied geometry, and computational mechanics.

In this project, I mainly spend time working on a mobile ROS-based robotic platform called Rbkairos, combined with advanced sensors and devices used in Virtual, Augmented, and Mixed Reality.

Institute of Visual Computing and Human-Centered Technology | Professional, scientific and technical activities |

soroosh.mortezaipoor@tuwien.ac.at | <https://informatics.tuwien.ac.at/people/soroosh-mortezaipoor> | VIENNA

2020 – CURRENT

ENTREPRENEUR, YOUNG STARTUPS CONSULTANT – FREELANCER

Besides my main job, I enjoy sharing my knowledge and experience with young startups in various areas, including but not limited to:

- Correctly forming and commercializing the startup idea
- Building the right founding team with the necessary set of expertise
- Fundamental processes
- Technical team leader finding and assessment
- Building and how to train technical team
- Offshore and remote technical teams, how to hire, train and manage
- Marketing channels and product presentation
- Networking

2016 – 2020 – Vienna, Austria

CHIEF TECHNOLOGY OFFICER (CTO) – NATIVY TRANSLATIONS (GMBH)

Nativy is a professional excellent-quality translation and content providing platform, that automates the whole process of having content-sensitive documents human-translated. Although the major clients of Nativy are multi-national and

multi-lingual companies such as Siemens, RWE, REWE, Western Union, Heineken, Do&Co, etc., private individuals can enjoy the benefits of Nativy Platform to have their documents translated with a few clicks. Furthermore, Nativy provides its partners, including WPML, with the possibility to enable their clients to order translations from within their CMSs, portals, and websites, without having to import/export and files, all through a ready-to-use API set.

My role in Nativy includes but not limited to:

- Head of the software development unit
- Building and training an offshore software development team
- Creating and training an on-site software development team
- Redesigning the platform (Architecture, Technology, etc.)
- Designing and implementing algorithms and procedures such as
- Expert retrieval systems
- High-performance resource scheduling systems
- Text processing and CAT (Computer-Aided Translation) tools
- Supervising and implementing Software Development Lifecycle (SDLC) processes and development methodologies (mainly SCRUM)
- Supervising Continuous Integration (CI) and Continuous Delivery (CD) implementation using Microsoft Azure Pipelines
- Supervising the software testing team (Manual testing, and automated unit/API/Functional/E2E testing)

Nativy employs a wide variety of technologies, including ASP.NET WebForms/MVC, Java, Apache Solr, Apache Lucene, Microsoft Azure Services, Amazon Web Services (AWS), etc.

Vienna, Austria

2013 – 2016

LEAD DEVELOPER – NATIVY TRANSLATIONS (GMBH)

During this time, we have refactored the code, redesigned the database, and made fundamental changes in UI/UX of the platform.

Some technologies and platforms we introduced into the system include but not limited to:

- Switching to the latest .NET Framework
- Moving the majority of resources to the cloud (Microsoft Azure, Amazon AWS, ...)
- Employing Apache Lucene, Apache Tika, etc. for different purposes in the system
- Introducing and utilizing Linq2SQL ORM
- Introducing new workflows for the ordering process in the system
- Expanding Nativy Connect API, an API set for partner companies
- Switching to AJAX-based pages designed using native HTML/CSS/JS from Telerik ASP.NET Components

Vienna, Austria

2011 – 2012

SOFTWARE ARCHITECT AND DEVELOPER – ZIGOORA

A Canadian-Iranian startup. A crowdsourcing translation platform capable of providing high-quality translations supported by a machine translation engine, and its human members. Despite its very complex concept and workflow, Zigoora was developed using ASP.NET and jQuery.

Tehran, Iran

2008 – 2012

FREELANCE DEVELOPER

I did various projects with very different sizes. The platforms and technologies I used were mostly:

- .NET Windows Form (C++.NET and C#.NET)
- ASP.NET
- DotNetNuke
- MS Office Access
- MS SQL Server
- ...

Tehran, Iran

2006 – 2012

PART-TIME IT SUPPORT/NETWORK ADMINISTRATOR/SOFTWARE DEVELOPER – SAZEH ALIAZH ALBORZ LTD.

Sazeh Aliazh is a middle-sized company that manufactures steel spare parts for various cars, located in Alborz Industrial Town in Qazvin, Iran. In addition to setting up and supporting their Windows-based network, I spent some time developing mini-applications to automatize certain workflows in the company.

Alborz Industrial Town, Iran

2010 – 2011

PROGRAMMING TUTOR – IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

I taught Microsoft C#.NET in two levels, beginner and advanced. I had two classes, each around 10 people from undergraduate students to Ph.D. students from Iran University of Science and Technology.

Tehran, Iran

2009 – 2010

TEACHER (PROGRAMMING) – IRANIAN ORGANIZATION FOR DEVELOPMENT OF EXCEPTIONAL TALENTS

I taught middle-school and high-school children computer programming, as a complementary part to their primary curriculum.

Qazvin, Iran

2004 – 2010

IT SUPPORT/NETWORK ADMINISTRATOR – ALBORZ POOLADIN 2000 LTD.

Alborz Pooladin 2000 Ltd was a small/middle-sized company back then that manufactured steel spare parts for various car manufacturers in Iran. I set up and maintained their Windows-based network and maintained and supported their IT infrastructure technically.

Alborz Industrial Town, Iran

2008 – 2009

SOFTWARE ENGINEERING INTERN – HANFEKRAN IT CORP.

I was appointed to different projects to learn how the software development processes and methodologies look like but mainly focused on extending a cloud-based time attendance software for enterprises. During this time, I became familiar with the fundamentals of teamwork and improved my development skills drastically.

Tehran, Iran

● EDUCATION AND TRAINING

2017 – CURRENT – Vienna, Austria

DR. TECHN. (PH.D.) - CANDIDATE – Vienna University of Technology (TU Wien)

Ph.D. candidate at the Institute of Visual Computing and Human-Centered Technology. A member of the prestigious project “SFB Advanced Computational Design” of The Center for Geometry and Computational Design, TU Wien, Vienna, Austria.

Under supervision of Univ.Prof. Mag.rer.nat. Dr.techn. Hannes Kaufmann

Field(s) of study

- Robotics and Haptics in VR

Robotics; Large-Scale Haptic Interactions in Virtual Reality, Based on a Mobile Robotic Platform |

<https://informatics.tuwien.ac.at/orgs/e193-02>

2013 – 2016 – Vienna, Austria

DIPL.-ING. (MASTER OF SCIENCE) – Vienna University of Technology (TU Wien)

Dipl.-Ing. (equivalent to Master of Science in German-speaking countries) in Logic and Computation (Formerly known as Computational Intelligence) with a focus on Artificial Intelligence

Under the supervision of Ao.Univ.Prof. Dipl.-Ing. Dr.techn. Markus Vincze at Automation and Control Institute (ACIN), TU Wien

Field(s) of study

- Computational Intelligence (Logic and Computation)

Optimizations and Improvements of Topographic Robotic Grasping using Machine Learning Approaches |

<https://informatics.tuwien.ac.at/master/logic-and-computation/>

2006 – 2011 – Tehran, Iran

BACHELOR OF SCIENCE/ENGINEERING – Iran University of Science and Technology

Major: Software Engineering

Under the supervision of Dr. Behrouz Minaie

Field(s) of study

- Computer Engineering - Software

A new priority-based agent communication control mechanism for multi-player games using Machinetta |

<http://ce.iust.ac.ir/>

1998 – 2006 – Qazvin, Iran

HIGH SCHOOL DIPLOMA – Iranian National Organization for Development of Exceptional Talents

Mathematics/Physics

● **LANGUAGE SKILLS**

Mother tongue(s): PERSIAN

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
GERMAN	B1	B2	B1	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● NETWORKS AND MEMBERSHIPS

Memberships

Computer Graphics Research Group - VR and AR subgroup, TU Wien **2019 - present**

- Vienna University of Technology
- Roll: Robotics Researcher/ Project Assistant
- Supervisor: Prof. Mag. Dr. Hannes Kaufmann

Interactive Media Systems Research Group, TU Wien **2016 - 2019**

- Vienna University of Technology
- Roll: Robotics Researcher
- Supervisor: Prof. Mag. Dr. Hannes Kaufmann

Intelligent Automation Laboratory **2009 - 2011**

- Iran University of Science and Technology
- Roll: Research Assistant
- Supervisor: Assis. Prof. Dr. Peyman Kabiri

2nd Khawrazmi Robotic Competitions November **2009**

- Roll: Technical Committee (TC) member (Referee)
- Field: Search and Rescue

USARSim Developers Community **2010 - 2013**

- Roll: Developer on UT3, UDK
- Designed, developed and supported by NIST

Computer Engineering Scientific Association **2009 - 2011**

- School of Computer Engineering Iran University of Science and Technology
- Roll: Official Elected Member

Robotic Scientific Association **2007 - 2009**

- Iran University of Science and Technology
- Roll: Member

● HONOURS AND AWARDS

Honours and awards

- Standing amongst top 40 young Austrian companies with Nativy in 2016, 2017, 2018, 2019
- International Robocup Competitions - 2009 Graz, Austria
- International IranOpen Robocup Competitions - 2009 Qazvin, Iran
- International Robocup Competitions - 2008 Suzhou, China
- International IranOpen Robocup Competitions - 2008 Qazvin, Iran
- Awarded for standing among top 1% at the nation-wide university entrance exam

● COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

Although I had experience working in teams before, the first real challenge as a member of a professional team was with a fast-paced young, and enthusiastic team when I was involved in Robocup competitions and competed against the bests of the field at international RoboCup competitions during my undergraduate studies. Besides, I gained excellent presentation skills, thanks to many seminars, international competitions, international symposiums, and summer schools I attended and delivered presentations. Moreover, during my time in Nativy Translations, and as a development lead, I needed to communicate with not only technical people and domain experts in my own team as well as our partner corporates, but also with people with a superficial level of IT and software background knowledge. In the beginning, I found it very cumbersome and occasionally impossible to hold a conversation on a technical topic with people who had minimal experience in the field. However, later, I started to like it very much, as the ability to put such complex concepts into simple words that everyone could understand was grown inside me. After all, the leading quality that a competent CTO should possess is the ability to communicate.

● **JOB-RELATED SKILLS**

Job-related skills

Team building
Team leadership
Critical and creative thinking
Agile methodologies, especially SCRUM
Problem-solving
SDLC process building
DevOps

Software related

- .NET
- ASP.NET MVC
- MVVM Frameworks
- Design patterns
- RDB/No-Sql
- Python 2.7
- Cloud-based solutions and services
- Information retrieval systems (Search Engines)
- Automated testing frameworks
- ...

Robotics related:

- Linux
- C++
- Python
- ROS (Robot Operating System)
- Robot Modeling - URDF
- Robot Simulation (Unity, Gazebo)
- ROS#
- Robot control stacks (Control, Localization, Navigation, Exploration)
- Microcontroller programming
- VAL3 - Staubli robots

VR Related:

- Unity
- Steam VR - OpenVR Lib
- Experience with VR Headsets (VIVE, Quest, Rift)

● **PROJECTS**

2021 – CURRENT

Classification of Scanning Electron Microscopy (SEM) images of Carbon Nano-tubes

One of the challenging issues in determining the quality of Carbon Nano-tubes is to determine the density of them from Scanning Electron Microscopy (SEM) images. The SEM, with the aid of electron bombardment, provides images of objects as small as 10 nanometers for study. In this project, the images from SEM are classified using machine vision and machine learning approaches. This project is conducted in cooperation with the IK International University, Qazvin, Iran.

01/2021 – 04/2021

Autonomous Indoor Photographer Robot

A custom robot, made on ROS-based Turtlebot 2 base with a Raspberry Pi 4B controller computer. In this robot, a DSLR camera mounted on a 2 DOF turret is controlled by the onboard computer. The responsibility of the robot is to explore an indoor unknown environment, make a map of the environment and take thousands of photos from different specific angles for digital reconstruction purposes.

This robot has been made and programmed for Illusion Walk KG, Berlin

In this project, a fully automatic greenhouse was implemented and built using Raspberry PI 3B+, which is capable of sensing the environment and make corresponding decisions based on the sensor data. This greenhouse is capable of managing all necessary aspects without any human intervention, including controlling lighting, watering, fertilizer, stabilizing temperature and humidity, airflow control, etc.

Additionally, an implemented web-based interface allows access to the data of the greenhouse from anywhere anytime, in addition to allowing controlled manual operations.

● CERTIFICATIONS

Certifications

- IEEE-RAS Safety, Security and Rescue Robotics Summer School - 2012, Alanya, Turkey
 - Certified by IEEE, IEEE-RAS, NIST, Robocup Rescue and Robotit
 - Subject: Safety, Security and Rescue Robotics - Machine Learning Practicals
- ROS RoboCup Rescue Summerschool - 2012, Graz, Austria
 - Certified by European Union, SiAt, Republic of Slovenia, Graz University of Technology and RoboCup Federation
 - Subject: Introduction to ROS (Robot Operating System)
- Data Mining and its Application in Industry and Technology - 2009, Tehran, Iran
 - Certified by Iran University of Science and Technology, Industrial Eng. and Computer Eng. Schools
 - Instructor: Prof. Dr. Gholamreza Nakhaeizadeh, former head of datamining department at Deimler and professor of KIT, Germany
- Application of Data Mining in CRM and Quality Management - 2009, Tehran, Iran
 - Certified by Iran University of Science and Technology, Industrial Eng. and Computer Eng. Schools
 - Instructor: Prof. Dr. Gholamreza Nakhaeizadeh
- Introduction to Data Mining - 2008, Isfahan, Iran
 - Certified by TUV Rheinland Academy
 - Instructor: Prof. Dr. Gholamreza Nakhaeizadeh