

# Novin SHAHROUDI

## PERSONAL INFORMATION

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EMAIL: [novin@ut.ee](mailto:novin@ut.ee)  
SKYPE: novinshahroudi  
OTHER: [Linkedin](#) / [Github](#) / [stackoverflow](#) / [Webpage](#)

## WORK EXPERIENCE

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- 2011-2017 | Member of [Nao Humanoid Robot Lab.](#)  
*Mechatronics Research Laboratory*
- Team Leader for RoboCup Nagoya, Japan 2017
  - Participating in International RoboCup competitions
  - Teamwork and software team skills
  - Publishing papers and technical documents
  - Project management and organization
  - Research and development of various software/robotic projects
- FALL 2014 | Teaching Assistant, ADVANCED PROGRAMMING WITH C++  
Prof. Omid Amirghiasvand, Computer Eng. Faculty, QIAU, Qazvin
- JULY 2014 | Co-founder at [GANDOMAK LLC](#)  
QIAU's Incubator Center of Technology Units, Qazvin  
Indooria, start-up idea; An indoor positioning and navigation mobile application
- Since 2013 | Organizing and Technical Committee of RoboCup Iran Open  
Standard Platform League
- 2013-2015 | Developer at DISTRIBUTED SYSTEMS AND PARALLEL PROCESSING LAB.  
SYNTECH Technology and Innovation Center, Qazvin  
Feasibility study and deployment of UNICORE middleware

## EDUCATION

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- 2017-present | M.Sc. in COMPUTER SCIENCE, **University of Tartu**, Estonia
- 2011-2016 | B.Sc. in COMPUTER SOFTWARE, **Qazvin Azad University (QIAU)**, Qazvin  
Thesis: "Localization Methods for Indoor Positioning" | Advisor: Dr. Babak Nasiri  
GPA: 17.11/20, RANK: 4<sup>th</sup>
- 2007-2011 | Diploma in Mathematics, **Rahyar High School**, Tehran  
GPA: 16.03/20

## SKILLS

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- Team: Scrum, Communication, Leadership, Management
- Programming: C/C++, Python, Matlab, R, Shell Script, PHP, JAVA, Makefile, CMake, Javascript, HTML, CSS, SQL Scripts,  $\LaTeX$
- Libraries/Frameworks: Keras, Scipy, ROS, Google Protobuf, phash, Django, Joomla
- SDK/API: Aldebaran Naoqi SDK, Android SDK, Qt SDK
- IDE: Eclipse, RStudio, Pycharm, Android Studio, Qt Creator, Visual Studio
- Misc: System Programming (Linux IPC), VIM, MC (Midnight Commander), Autocad, Trello, LTSP, UNICORE, JOSM

## SELECTED PROJECTS

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Fall 2017	Restaurant Visitor Forecasting Data Mining Course Project Time-series analysis using Recurrent Neural Networks with LSTM cells
Fall 2017	Music Generation using midi files Neural Network Course Project Learning textual representation of music pieces using RNN-LSTM
Fall 2017	Evolution of a Multi-joint Creature in Unity Advanced Algorithmics Course Project Simulation and optimization of spatial parameters in Unity3D using genetic algorithm
2015-2016	Indoor Positioning System Gandomak LLC (Indooria startup team) Design and Development of an Indoor Positioning System for smartphones using WIFIs & BLE sensors. Implementation of Kalman and Particle Filter algorithms.
2014-2015	Sound Signal Processing Nao Humanoid Robot Lab. Detection of a predefined whistle and sound signal using FFTW C++ library and phash based on Aldebaran Naoqi framework for Nao robot.
2013-2015	Multi-agent Cooperation of Nao Robots in Soccer Game Nao Humanoid Robot Lab. Design and Implementation of Behavior Control System of Nao robot in soccer game using Hierarchical Finite State Machines (HFSM) implemented using C++. Voting and time-optimal task assignment and behavioral algorithms.
2013-2014	QGrid Project Distributed Systems and Parallel Processing Lab. QGrid is a grid computing project based on BOINC4 platform and producing 10 TFlops computational power.
2012	Network Monitor and Robots Team Communication Nao Humanoid Robot Lab. Socket programming using UDP/TCP and Qt to visualize robots packets.

## LANGUAGES

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PERSIAN	Mother-tongue
ENGLISH	Fluent
GERMAN	Beginner

## RESEARCH INTERESTS

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Neuro-evolution, Multi-Agent Systems, Deep Learning, Machine Learning, Mobile Robots and Autonomous Systems, Navigation and Positioning Systems, Estimation theory

## PUBLISHED TECHNICAL REPORTS

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- Omid AmirGhiasvand, Novin Shahroudi, Mohammad A. Sharpasand, Aref Moqadam Mehr, et.al. MRL-SPL Team Description Standard Platform Team, RoboCup 2015, Hefei, China.
- O. Amirghiasvand, M. Shafiei R., M. A. Zakeri H., N. Shahroudi, et.al. MRL-SPL Team Description Standard Platform Team, RoboCup 2014, João Pessoa, Brazil.
- M. Lashgarian, M. Shafiei R., N. Shahroudi, et.al. MRL-SPL Team Description Standard Platform Team, RoboCup 2013, Eindhoven, The Netherlands.

## HONORS AND AWARDS

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| 2011-2016 | Recipient of Scholarship from QIAU<br>B.Eng. Computer Software   |
| 2009-2017 | Participating in International RoboCup Competitions <ul style="list-style-type: none"><li>• ranked 5th in SPL, Japan, Nagoya — 2017</li><li>• 2nd place of SPL, Tehran — 2015</li><li>• Quarter Final in SPL, China, Hefei — 2015</li><li>• Quarter Final in SPL, Brazil, João Pessoa — 2014</li><li>• 1st place of SPL, Tehran — 2014</li><li>• 3rd place of SPL, Germany, Magdeburg — 2014</li><li>• 3rd place of SPL, Tehran — 2013</li><li>• 1st place of SPL, Tehran — 2012</li><li>• Junior 1-1 soccer league, Qazvin, QIAU — 2009</li></ul> |

## RECREATIONAL ACTIVITIES

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- Sports: Boxing, Running, Table Tennis  
Reading: Philosophy and social studies  
Movie: Sci-fic, documentary  
Other: sketching, photography, cooking, hanging around with friends

## REFERENCES

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Available upon request.