

Novin SHAHROUDI

PERSONAL INFORMATION

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

EDUCATION

2017 – present	M.Sc. in SOFTWARE ENGINEERING, 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 th
2007 – 2011	Diploma in Mathematics, Rahyar High School , Tehran GPA: 16.03/20

EXPERIENCE

2017 – PRESENT	Master Student, MACHINE LEARNING RESEARCH GROUP Prof. Meelis Kull, Institute of Computer Science, Tartu.
2018	Chair of Organizing Committee of RoboCup Montreal, Canada Standard Platform League
2011-2017	Member of Nao Humanoid Robot Lab . <i>Mechatronics Research Laboratory</i> <ul style="list-style-type: none">• 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

SELECTED PROJECTS

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

PERSIAN	Mother-tongue
ENGLISH	Fluent
ESTONIAN	Beginner
GERMAN	Beginner

CERTIFICATES

SEP 2016	TOEFL iBT®: 99 (READING:27; LISTENING:23; SPEAKING:27; WRITING:22)
DEC 2016	GRE®: VERBAL: 152 (55 th percentile) Q: 159 (73 rd percentile) AWA: 3.5 (42 nd percentile)
FEB 2018	DEEP LEARNING BY ANDREW NG – Neural Networks and Deep Learning
FEB 2018	DEEP LEARNING BY ANDREW NG – Hyperparameter tuning, Regularization and Optimization
FEB 2018	DEEP LEARNING BY ANDREW NG – Structuring Machine Learning Projects

RESEARCH INTERESTS

Neuro-evolution, Multi-Agent Systems, Deep Reinforcement Learning, Machine Learning, Mobile Robots and Autonomous Systems, Probabilistic Robotics, Indoor Positioning Systems, Estimation Theory

PUBLICATION

- A. M. Mehr and N. Shahroudi, "A debugger tool for vision on humanoid framework," AI & Robotics and 5th RoboCup Iran Open International Symposium (RIOS), 2013 3rd Joint Conference of, Tehran, 2013, pp. 1-5.

PUBLISHED TECHNICAL REPORTS

- Novin Shahroudi, Ali Piry, et.al. Multi-robot Coordination Algorithm ([Task Assignment](#)), MRL-SPL, 2017.
- 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

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

SKILLS

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

RECREATIONAL ACTIVITIES

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

REFERENCES

Available upon request.