

Erfan Jazeb Nikoo

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I have over four years of experience in **Android** application developing and also, over fifteen years as a Roboticist with a significant amount of top ranks in various worldwide competitions in this field. A year ago, I heard about **Flutter** framework and started to learn it. It brings fast development, native performance, and smooth UI experience. I designed and developed two different projects from scratch using Flutter framework, and built many utilities and plugins. I have conducted research on embedded systems and Artificial Intelligence in several research activities at Mechatronics Research Laboratory as a senior researcher for 7 years. I focused on machine learning, Artificial Intelligence, Multi-Agent systems and autonomous agent using **Java** and **C/C++** languages on a different branch of Robotics fields. My scientific contribution led to achieving international ranks in RoboCup competitions.

Technical Skills

Likes: flutter dart java android c++ c robotics machine-learning artificial-intelligence arm embedded agile

Experience

Flutter Developer – freelancer Dec 2018 → Current
flutter, dart, material-design, agile, amazon-ec2, microservices, rest, android, ios, social-networking

I am designing and developing a social network mobile app using Flutter for both Android and iOS platforms. Persian Mate is a location-based social search mobile app that allows users to like or dislike other users and allows users to chat if both parties liked each other in the app.

<https://www.behance.net/gallery/80127741/PMX>

Flutter Developer – Koozeh institute culture & art Dec 2017 → Dec 2018
flutter, dart, material-design, android, ios, agile, rest, offline-caching, multimedia

Design and development of a multimedia magazine reader mobile application using Flutter framework in Dart language, and Java backend. Koozeh supports video, audio, and image as content. It also has features like categorization, subscription, e-payment, social, and personal profile.

<https://www.behance.net/gallery/73037513/Koozeh>

Team Leader – Prof. Hessabi Robotic Research Center Oct 2015 → Aug 2017
c++11, ros, mavlink, c, qt

I was the leader of Guilano autonomous multi-rotor robot team. A multi-rotor or multi-copter is a rotorcraft with more than two rotors. An advantage of multirotor aircraft is the simpler rotor mechanics required for flight control and make all of the behaviors autonomously. We designed, optimized and manufactured hexacopter drone with a vision based AI and online 3D mapping using the C++ programming language on ROS platform.

Web Developer – Gilan HVAC House Nov 2016 → May 2017
wordpress

I designed and developed "yestco.com" and "gilanhvachouse.com" websites for Gilan HVAC House company. HVAC is short for heating, ventilation, and air conditioning. The system is used to provide heating and cooling services to buildings. HVAC systems have become the required industry standard for construction of new buildings.

Android Developer – Binogoo Jan 2017 → Apr 2017
android, material-design

Binogoo is an information system and social app that includes mobile clients, web clients and a web dashboard for addressing issues in urban environments and organizations.

Senior Researcher – SYNTECH Technology and Innovation Center Jan 2012 → Aug 2016
java, simulation, multi-agent, artificial-intelligence, robocup

I was a member of the MRL rescue agent simulation team. I worked on autonomous agents and multi-agent distributed systems for fire brigades and ambulance team searching and decision making in communication less situation and infrastructure improvement using Java programming language. The Agent Simulation competition involves primarily evaluating the performance of agent teams on different maps of the RoboCup Rescue Agent Simulation (RCRS) platform, a comprehensive simulation environment for research in disaster response management.

Founder and CEO – Rayan Samaneh Asr Nikoo
asp.net, mysql, c#

Sep 2014 → Dec 2015

Rayan Samaneh is a limited liability company found in 2014 which worked on producing software and automation. Design, develop and support of web-based archive automation of Guilan office of schools' renovation, development, and mobilization was one of the projects of this company.

High School Teacher – Farzanegan 5 High School
c, avr, robotics, artificial-intelligence, robocup

Sep 2012 → Dec 2013

I was the team leader and teacher of C programming for embedded system and RoboCup junior robots circuit designing. We designed and built RoboCup junior rescue robot by AVR microcontroller programmed by "CodeVision AVR" with C programming language

High School Teacher – Allameh Helli High School
c++, simulation, multi-agent, artificial-intelligence, robocup

Jul 2013 → Sep 2013

I was the team leader and teacher of C++ programming and RoboCup soccer 2D simulation's AI and autonomous Multi-Agent systems

Senior Researcher – Mechatronics Research Laboratory
c++, c++11, qt, artificial-intelligence, multi-agent, netbeans, robocup

Aug 2012 → Aug 2013

I was a member of the Artificial Intelligence group of MRL middle-size soccer robots team. I worked on offensive strategy, attacker and halfback roles using the C++ programming language. In RoboCup MSL teams of five fully autonomous robots play soccer with a regular size FIFA soccer ball. Teams are free to design their own hardware but all sensors have to be on-board and there are a maximum size and weight for the robots. The research focus is on mechatronics design, control, and multi-agent cooperation at plan and perception levels.

Senior Researcher – Karaj Robotics Research Center
c, avr, robotics, artificial-intelligence, robocup

Sep 2011 → Sep 2012

I was the leader of the electronic group of Phoenix autonomous underwater vehicles team (Phoenix).

Researcher – Mechatronics Research Laboratory
c, electronics, arm, arm7, cortex-m3, can-bus, protocols, driver, robocup, keil

Sep 2010 → Oct 2011

I was a member of the electronic group of MRL middle size soccer robots team. I designed, optimized and manufactured Touchscreen graphical data monitor, debugger and Logger for CAN protocol based on an ARM-microprocessor programmed by "Keil uVision" with C/C++ programming language which designed for an autonomous middle size robot.

Junior Researcher – Mirza Koochack Khan High School
c, avr, robocup, electronics

Sep 2007 → Sep 2008

I was a member of Spinas junior soccer team. We designed and built different parts of Junior Soccer robots with AVR microcontroller based circuits programmed by "CodeVision AVR" with the C programming language.

Junior Researcher – Mirza Koochack Khan High School
c++, simulation, robocup, artificial-intelligence, multi-agent

Sep 2007 → Sep 2008

I was a member of Marlik soccer 2D simulation team. I worked on offensive strategy, shoot and cross behaviors using the C++ programming language.

Junior Researcher – Mirza Koochack Khan High School
c, avr, robocup, electronics

Sep 2003 → Sep 2007

I was a member of the Hidden extra junior pathfinder robot team. We built an AVR microcontroller based robot and programmed by "CodeVision AVR" with C programming language. The line following robot is one of the autonomous robots. That detects and follows a line drawn on the area. The line is indicated by a black line on a white surface or white line on a black surface. This robot must be sensed the color of the line.

Education

B.Sc. Electronics Engineering – Islamic Azad University lahijan
c++11, c, robotics, electronics, java, simulation, artificial-intelligence

Sep 2014 → Sep 2017

GPA: 3.25 out of 4.0

My thesis was Designing, Optimization And Manufacturing Multirotor Robot With A Vision-Based AI.

B.Sc. Electronics Engineering – QIAU, Qazvin Azad University
java, c++, c, embedded, qt, artificial-intelligence, multi-agent, robocup

Sep 2010 → Sep 2013

I left university because of health problems. After recovery, I transferred to Lahijan University.

Diploma of Mathematics and Physics – SAMPAD (NODET)
c, c++, avr, simulation, artificial-intelligence

2005 → 2008

GPA: 3.2 out of 4.0

I studied at Mirza Koochak high school under the supervision of national organization for development of exceptional talents (NODET)

Certifications

Participated at IranOpen UAV - Outdoor league, IranOpen RoboCup 2017 Tehran - Iran – *Apr 2017 → Aug 2017*
<https://en.wikipedia.org/wiki/IranOpen>
c++11, ros, mavlink, c, qt

1st Place at RoboCup competitions rescue agent simulation league - Leipzig, Germany – *2016 → Aug 2016*
<https://roborecue.sourceforge.io/data/2016-RSL/agent/results/index.html>
java, simulation, multi-agent, artificial-intelligence, robocup

1st Place at RoboCup competitions rescue agent simulation league technical challenge - Leipzig, Germany – *2016 → Aug 2016*
<https://roborecue.sourceforge.io/data/2016-RSL/agent/results/index.html>
java, simulation, multi-agent, artificial-intelligence, robocup

1st Place at RoboCup competitions rescue simulation league infrastructure challenge - Leipzig, Germany – *2016 → Aug 2016*
<https://rescuesim.robocup.org/robocup-2016-infrastructure-results/>
java, simulation, multi-agent, artificial-intelligence, robocup

1st Place at Iran Open RoboCup 2015 competitions rescue agent simulation league - Tehran, Iran – *Apr 2015 → Aug 2016*
<http://2015.iranopen.ir/en-gb/leagues/robocuprescue/rescueagentsimulationleague.aspx>
java, simulation, multi-agent, artificial-intelligence, robocup

1st Place at RoboCup competitions rescue agent simulation league's best presentation - Hefei, China – *2015 → Aug 2016*
<https://rescuesim.robocup.org/2015-hefei-agent-results/>
java, simulation, multi-agent, artificial-intelligence, robocup

2nd Place at RoboCup competitions rescue agent simulation league - Hefei, China – *2015 → Aug 2016*
<https://rescuesim.robocup.org/2015-hefei-agent-results/>
java, simulation, multi-agent, artificial-intelligence, robocup

1st Place at RoboCup competitions rescue agent simulation league multi agent challenge - Mexico City, Mexico – *Jun 2012 → Aug 2016*
<https://rescuesim.robocup.org/2012-mexicocity-agent-results/>
java, simulation, multi-agent, artificial-intelligence, robocup

Participated at rescue agent simulation league, RoboCup 2012, Mexico City, Mexico – *Jun 2012 → Aug 2016*
<https://rescuesim.robocup.org/2012-mexicocity-agent-results/>
java, simulation, multi-agent, artificial-intelligence, robocup

Participated at rescue agent simulation league, RoboCup IranOpen 2012, Tehran, Iran – *Apr 2012 → Aug 2016*
<https://en.wikipedia.org/wiki/IranOpen>
java, simulation, multi-agent, artificial-intelligence, robocup

Participated at middle size league, RoboCup 2013, Eindhoven, Netherlands – *Jun 2013 → Aug 2013*
<https://msl.robocup.org/history/2013-detailed-results>
c++, qt, multi-agent, artificial-intelligence

Participated in middle size league, RoboCup IranOpen 2013, Tehran, Iran – *Apr 2013 → Aug 2013*
<https://en.wikipedia.org/wiki/IranOpen>
c++, c++11, qt, artificial-intelligence, multi-agent, netbeans, robocup

Participated at middle size league, RoboCup 2011, Istanbul, Turkey – *Jul 2011 → Oct 2011*
<https://msl.robocup.org/history/2011-detailed-results>
electronics, arm, arm7, cortex-m3, can-bus, protocols, driver, robocup, keil

1st Place at Iran Open RoboCup 2011 competitions middle size league - Tehran, Iran – *Apr 2011 → Oct 2011*
<https://en.wikipedia.org/wiki/IranOpen>
electronics, arm, arm7, cortex-m3, can-bus, protocols, driver, robocup, keil

Participated at junior soccer league, IranOpen RoboCup 2008, Qazvin, Iran – *Apr 2008 → Sep 2008*
<https://en.wikipedia.org/wiki/IranOpen>

Participated at soccer 2D simulation league, IranOpen RoboCup 2008, Qazvin, Iran – *Apr 2008 → Sep 2008*
<https://en.wikipedia.org/wiki/IranOpen>
c++, simulation, robocup, artificial-intelligence, multi-agent

2nd Place at extra junior pathfinder league, IranOpen RoboCup 2007, Tehran, Iran – https://en.wikipedia.org/wiki/IranOpen_c_avr_electronics

Apr 2007 → Sep 2007

Projects & Interests

erfanjzabnikoo/scaffold_factory – https://github.com/erfanjzabnikoo/scaffold_factory
flutter, dart, android, ios, material-design

Oct 2018 → Current

A Flutter plugin to build and customize the Flutter's scaffold widget with simple and flexible configurations.

erfanjzabnikoo/internet_download_manager – https://github.com/erfanjzabnikoo/internet_download_manager
android, java, download-manager

Nov 2017 → Dec 2017

Internet Download Manager for Android devices

erfanjzabnikoo/aurora_gui – https://github.com/erfanjzabnikoo/aurora_gui
c++11, qt, ros, mavlink

Feb 2017 → Oct 2017

GUI application of Aurora project. Aurora is an program of autonomous multirotor robots based on APM autopilot. We use ROS platform and Mavlink protocol for connection between program and robot.

erfanjzabnikoo/aurora_core – https://github.com/erfanjzabnikoo/aurora_core
c++11, ros, mavlink, c, qt

Feb 2017 → Oct 2017

Core program of autonomous multi rotor robots based on APM autopilot. We use ROS platform and Mavlink protocol for connection between program and robot.

erfanjzabnikoo/optimization_nanofilm_thickness_using_ga – https://github.com/erfanjzabnikoo/optimization_nanofilm_thickness_using_ga
c++, optimization, genetic-algorithm, nano

Feb 2016 → Aug 2017

Optimization of nanofilms thickness using a Genetic Algorithm (GA)

erfanjzabnikoo/Quala-PID-Pathfinder – <https://github.com/erfanjzabnikoo/Quala-PID-Pathfinder>
c, avr, electronics, robotics, codevisionavr, pid, pwm, path-finding

Aug 2015 → Oct 2016

Operating the Pathfinder robot with feedback from sensors and using PID control

erfanjzabnikoo/Multi-Task-Monitoring-and-Logger-System – <https://github.com/erfanjzabnikoo/Multi-Task-Monitoring-and-Logger-System>

Sep 2010 → Nov 2011

Graphical data monitoring, Logger and debugger for CAN protocol based on ARM microprocessor

Public Artifacts

Guilano fully autonomous hexacopter robot - IMAV 2017 – <https://www.youtube.com/watch?v=wumIN9yP0dw&t=1s>
c++, ros, mavlink, c, qt, pid, computer-vision, kalman-filter

Jun 2017

Guilano team has been working on the development of multicopter robots since 2010. After several years of research on the mentioned field, we managed to rein...

Apps & Software

Koozeh – <https://play.google.com/store/apps/details?id=bina.ir.koozeh&hl=en>
flutter, dart, material-design, android, ios, agile, rest, offline-caching, multimedia

Dec 2017

The First Persian Multimedia Magazine Stand

Tools

First Computer: Pentium II

Favorite Editor: IntelliJ IDEA, Netbeans, Visual Studio Code