Sajad Azami **22 March, 1995**

CONTACT
INFORMATION

Dept. Computer Engineering
Amirkabir University of Technology
No. 424, Hafez Ave.
Tehran, Iran 15914

E-mail: sajjadaazami@gmail.com
Phone: +98 (936) 010 86 90
Homepage, Github, LinkedIn

RESEARCH INTERESTS
◇ Intelligent Robotics
◇ Statistical Machine Learning
◇ Deep Learning
◇ Cognitive Science
◇ Data Mining and Large Scale Data Analysis
◇ Game Theory, Mechanism Design
◇ Mathematical Optimization

EDUCATION

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
◇ B.Sc. Hardware Engineering,   2013 - 2018 (Expected)
(Ranked 2 among all Iranian Universities)
(Ranked 85 top Computer Science Universities in the World)
- Cumulative Grade Average:
  - Major Related Courses: 18.8/20
  - Last 40 Units: 18.4/20
  - Total Passed 92 Units: 16.52/20

Shahid Madani High School, Tabriz, Iran
◇ Diploma in Physics and Mathematics Discipline   2008 - 2012
- Cumulative Grade Average: 19.34/20
- Affiliated with *the National Organization for the Development of Exceptional Talents (NODET)*

RELEVANT
EDUCATION AND
COURSEWORK

◇ Amirkabir University of Technology

- **Design of Algorithms:** 17.5
- **Statistical Machine Learning (Graduate Level):** TBA
- **Stochastic Processes:** 19.2
- **Advanced Programming:** 20
- **Software Engineering:** 18
- **Principles of Data Mining:** TBA
- **Machine Learning(Graduate Level):**

Audited
- **Principles of Database Design:** 18
- **Database Design Lab:** 19.8
- **Research and Report Writing:** 16.7
- **Engineering Economics:** 20
- **Operating System Design:** 18.7
- **Operating System Design Lab:** 20

◇ Online Courses
- **Deep Learning for Self-Driving Cars**(Watching)   *MIT OpenCourseWare*
- **Machine Learning**   *Stanford University*
- **Neural Networks and Machine Learning**   *University of Toronto*
- **Mining Massive Datasets**   *Stanford University*
- **Introduction to Recommender Systems**   *University of Minnesota*

- **Algorithms I** — *Princeton University*
- **Game Theory** — *Stanford University and UBC*
- **Think Again How to Reason and Argue** — *Duke University*

HONORS AND AWARDS

◇ 3rd Place, Rescue Simulation League, Virtual Robot Competition, RoboCup 2016, Leipzig, Germany, As a member of SOSVR team

◇ First Place, Tehran Startup Weekend, Tehran, Iran, 2014

◇ Ranked in top 0.2% place among all applicants for the University Entrance Nationwide Exam (Approximately 350000 test-takers) in Math. and Eng., Iran, 2012

◇ Third Place, Tournament of the Towns Math Competition, Tabriz, Iran, 2011

TEACHING EXPERIENCE

Amirkabir University of Technology, Tehran, Iran
(sample graded material and student evaluations available upon request)

◇ **Teaching Assistant for Advanced Programming** — *Spring 2017*
Prof. M. Noorhosseini

◇ **Teaching Assistant for Introduction to Statistics and Probability** — *Spring 2017*
Prof. M. Amirhaeri

◇ **Teaching Assistant for Data Structures and Algorithm Design** — *Fall 2016*
Prof. M. Dehghan

◇ **Teaching Assistant for Advanced Programming** — *Spring 2016*
Prof. M. Noorhosseini

NOTABLE PROJECTS

◇ Research Projects

- **OpenVRI Framework** — *Dec 2016 - Present*
OpenVRI is an open source project. It is a framework for Robotics AI algorithm experiments. It isolates robot's AI algorithms from ROS and provides tools and API for developing Intelligent Robots.

- **LinkedIn Recommender System** — *Sept 2016 - Present*
Designing and implementing a Recommender System to recommend similar users based on their skills and other various characteristics on LinkedIn.

- **3D Human Pose Estimation from 2D Images for a Rescue Robot** — *Nov 2016 - Present*
Implementing and evaluating 3D human pose estimation using 2D raw images subscribed from robot's camera sensor on a simulated rescue robot.

- **Credit Card Transaction Fraud Detection** — *Nov 2016*
Project done for Iran's National Data Mining contest. The goal was to classify credit card transaction as fraud or non-fraud.

- **SOSVR Base Code** — *June 2016*
Base code of SOSVR team for Virtual Robot Competition, including behaviour, human detection, navigation and bring-up packages.(Python, C++, ROS, Human Detection)

- **Ice-Fire Challenge** — *March 2016*
Design and Implementation of a multi-agent algorithm for AI Challenge held at Sharif University of Technology, Tehran, Iran.(Java, Multi-Agent Algorithms,

Artifiial Intelligence)

◇ Academic Course Projects

- **Implementing and Evaluating a PGM for Classification of Illness**   *Fall 2016*
  (Python, Regression), *Statistical Machine Learning*
- **Implementing and Evaluating Generalized Autoregressive Conditional Heteroscedas-ticity Model to Predict Power Usage of Ontario State**   *Fall 2016*
  (Python, GARCH, Statistical Inference), *Statistical Machine Learning*
- **Implementing and Analysing Linear Regression on a Dataset of Student Grades**
  Fall 2016
  (Python, Regression), *Statistical Machine Learning*
- **Face Recognition Using SVD(An Implementation of this paper)**   *Fall 2016*
  (Matlab, SVD, Linear Algebra), *Advanced Engineering Mathematics*
- **Image Compressor Using Low Rank Matrix Approximation**   *Fall 2016*
  (Matlab, Matrix Factorization, SVD), *Advanced Engineering Mathematics*
- **Designing and Implementing Database of an insurance company** *Spring 2016*
  (Oracle Database), *Database Design Lab*
- **Designing and Implementing a chat room with NoSQL database** *Spring 2016*
  (XML, JSON, NoSQL, Java), *Principles of Database Design*
- **Implementing Process Migration on xv6 Operating System**   *Spring 2016*
  (mySQL), *Principles of Database Design*
- **Motion Planner Using Dijkstra Algorithm**   *Spring 2015*
  (Java), *Dijkstra, A*, Algorithm Design*
- **Implementing a File Compressor Using Huffman Algorithm**   *Fall 2014*
  (BST tree, Insertion Sort) (Java), *Data Structures*
- **Implementing a Web Browser and Download Manager**   *Spring 2014*
  (Java), *Advanced Programming*
- **Implementing a Graphical Game With Multiplayer Support**   *Spring 2014*
  (Java), *Advanced Programming*
- **Assembler For C Langue**   *Fall 2013*
  (C, Lexer ,Parser, Intermediate Code Generation), *Principles of Computer Pro-gramming*

RESEARCH
EXPERIENCE

◇ **Research Assistant at Cognitive Robotics Lab**   *July 2015 - Present*
Computer Engineering Department, Amirkabir University of Technology.
Supervisor: Prof.Shiry
◇ **Member of SOSVR Robotic Team**   *January 2015 - Present*
Vision, Navigation, SLAM and Behaviour

PUBLICATIONS

◇ M. TaherAhmadi, S. Azami, M. Javadi, S. Shiry, "OpenVRI, An Open-Source Virtual Robot Intelligence Framework".(to be submitted), March 2017.
◇ M. TaherAhmadi, S. Azami, S. Shiry, "3D Human Pose Estimation from 2D Images for a Rescue Robot".(to be submitted), March 2017.
◇ M. TaherAhmadi, S. Azami, S. Shiry, "S.O.S VR Team Description Paper, RoboCup 2016 Rescue Virtual Robot League". *International RoboCup Competition*, July 2016. (Link to Paper)

ACADEMIC TECHNICAL REPORTS	• Sajad Azami, "Detecting Credit Card Transaction Fraud Using Gradient Boosting" - Technical Report for Iran's National Data Mining Contest. (LaTeX)
	• Sajad Azami, "Implementing and Analysing Linear Regression on a Dataset" - Technical Report for Statistical Machine Learning Final Project. (LaTeX)
	• Sajad Azami, "Implementing and Evaluating a PGM for Classification of Illness" - Technical Report for Statistical Machine Learning Final Project. (LaTeX)
	• Sajad Azami, "Implementing and Evaluating a Parametric and a Non-Parametric model to Predict Power Usage of Ontario State" - Technical Report for Statistical Machine Learning Final Project. (LaTeX)
	• Sajad Azami, Taher Ahmadi, "Face Recognition With Singular Value Decomposition" - Technical Report for Implementation of this Paper. (LaTeX)
	• Sajad Azami, "Image Compression Using Low Rank Matrix Approximation" - Technical Report for Advanced Mathematics Final Project. (LaTeX)
	• Sajad Azami, "Fraud Detection Using Game Theory and Data Science" - Technical Report for Research Method and Technical Report Writing course. (LaTeX)
	• Sajad Azami, "Report for Project Implemented and Related Questions" - Technical Report for Project Done in Database Lab Course. (LaTeX)

WORK EXPERIENCE	◇ Senior Android Developer at Golrang Industrial Group(GIG) *Summer 2015*
	• **Neesa Organizational Bulletin** An enterprise generic newsletter for organizations, developed in Android and Django framework.
	• **Daroo Client** An enterprise Android application to be used by drugstores to order medicine online.
	◇ Android Developer at PANA Software Group *Feb 2014 - Jul 2015*
	• **Darsbarg** A well-designed Android application for selling and buying sample questions in order to prepare for exams.
	• **Treep** An Android application that I worked on as starter project to improve the application on it's second version.

LECTURES AND PRESENTATIONS	◇ **Guest Lecturer in 8th Linux Festival** *Amirkabir University of Technology* *May 2016*
	• Python Workshop
	• Linux Basic Workshop
	◇ **Android Workshop for Java Students(2 Sessions)** *Amirkabir University of Technology* *Spring 2016*

EXECUTIVE EXPERIENCE	◇ **Member of Technical Committee in 8th Linux Festival** *Amirkabir University of Technology* *May 2016*

SKILLS	◇ **PROGRAMMING**: Java, Python, C, C++, Matlab
	• Familiar With: J2EE, XML, JSON
	◇ **SCIENTIFIC TOOLS, PLATFORMS AND FRAMEWORKS**: ROS, Caffe, Theano, Scikit, Pandas, IPython, OpenCV, GNU Octave, Weka, Android
	◇ **DATABASES**: MySQL, MongoDB, Oracle, Microsoft SQL Server
	◇ **WEB LANGUAGES**: HTML, PHP, CSS, JavaScript
	◇ **SCRIPTING**: Bash
	◇ **OPERATING SYSTEM**: Linux
	◇ **TYPESETTING**: LaTeX, Vim

EXTRA-CURRICULAR ACTIVITIES	◇ Participating in AI and Data Mining Online Competitions.(Codes Are Available on My Personal Github)	
	◇ Resposible for Sports Section of Faculty	*2014 - 2016*
	◇ Captain of Football and Futsal Team of Faculty	*2014 - 2016*
	◇ Writing for Pouyesh, CEIT students association magazine	*March 2016*
	◇ Playing Setar, A Persian Musical Instrument	*2012 - Present*
	◇ Reading Philosophy and Psychology Novels and Books	