

CONTACT  
INFORMATION

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

*E-mail:* [sajjadaazami@gmail.com](mailto: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: 16.7/20
    - 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

- |   |  |
|---|--|
| • <b>Design of Algorithms:</b> 17.5                         | Audited                                    |
| • <b>Statistical Machine Learning (Graduate Level):</b> TBA | • <b>Principles of Database Design:</b> 18 |
| • <b>Stochastic Processes:</b> 19.2                         | • <b>Database Design Lab:</b> 19.8         |
| • <b>Advanced Programming:</b> 20                           | • <b>Research and Report Writing:</b> 16.7 |
| • <b>Software Engineering:</b> 18                           | • <b>Engineering Economics:</b> 20         |
| • <b>Principles of Data Mining:</b> TBA                     | • <b>Operating System Design:</b> 18.7     |
| • <b>Machine Learning(Graduate Level):</b>                  | • <b>Operating System Design Lab:</b> 20   |

- ◇ Online Courses

- |   |                                |
|---|--------------------------------|
| • <b>Deep Learning for Self-Driving Cars</b> (Watching) | <i>MIT OpenCourseWare</i>      |
| • <b>Machine Learning</b>                               | <i>Stanford University</i>     |
| • <b>Neural Networks and Machine Learning</b>           | <i>University of Toronto</i>   |
| • <b>Mining Massive Datasets</b>                        | <i>Stanford University</i>     |
| • <b>Introduction to Recommender Systems</b>            | <i>University of Minnesota</i> |

- **Algorithms I**
- **Game Theory**
- **Think Again How to Reason and Argue**

*Princeton University  
Stanford University and UBC  
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 framework and a research tool for Robotics AI algorithm development. It provides tools and High-level API for Experimenting Intelligent Robots, train & test Learning Models, and evaluating results in 3D simulated environment.
  - **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)

◇ Academic Course Projects

- **Implementing and Evaluating a PGM for Classification of Illness** *Fall 2016*  
(Python, PGM), *Statistical Machine Learning*
- **Implementing and Evaluating Generalized Autoregressive Conditional Heteroscedasticity Model to Predict Power Usage of Ontario State** *Fall 2016*  
(Python, GARCH, GMM, Time Series Prediction, Statistical Inference), *Statistical Machine Learning*
- **Implementing and Analysing Linear Regression on a Dataset of Student Grades** *Fall 2016*  
(Python, Regression, Lasso, Evaluation Metrics), *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*
- **Design and Implementation of a Multi-Agent Algorithm** *Spring 2016*  
(Java, Multi-Agent Algorithms), *AI Challenge held at Sharif University of Technology, Tehran, Iran*
- **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 Language** *Fall 2013*  
(C, Lexer ,Parser, Intermediate Code Generation), *Principles of Computer Programming*

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

- ◇ S. Azami, M. TaherAhmadi, M. Javadi, S. Shiry. "OpenVRI, An Open-Source Virtual Robot Intelligence Framework". (to be submitted) In *Intelligent Robots and Systems, 2017. IROS 2017. IEEE/RSJ International Conference*. IEEE, 2017.
- ◇ M. TaherAhmadi, S. Azami, S. Shiry, "3D Human Pose Estimation from 2D Images for a Rescue Robot".(to be submitted) In *Intelligent Robots and Systems, 2017. IROS 2017. IEEE/RSJ International Conference*. IEEE, 2017.

	<ul style="list-style-type: none"> <li>◇ M. TaherAhmadi, S. Azami, S. Shiry, "S.O.S VR Team Description Paper, RoboCup 2016 Rescue Virtual Robot League". <i>International RoboCup Competition</i>, July 2016. (<a href="#">Link to Paper</a>)</li> </ul>	
ACADEMIC TECHNICAL REPORTS	<ul style="list-style-type: none"> <li>• Sajad Azami, "Parametric and Non-Parametric Time Series Analysis for Power Usage Data" - Technical Report for Statistical. (<a href="#">Link</a>)</li> <li>• Sajad Azami, "Detecting Credit Card Transaction Fraud Using Gradient Boosting" - Technical Report for Iran's National Data Mining Contest. (<a href="#">TeX</a>)</li> <li>• Sajad Azami, "Implementing and Analysing Linear Regression on a Dataset of Grades" - Technical Report for Statistical Machine Learning Final Project. (<a href="#">TeX</a>)</li> <li>• Sajad Azami, "Implementing and Evaluating Naive Bayes Model and PGM for Classification of Illness" - Technical Report for Statistical Machine Learning Final Project. (<a href="#">TeX</a>) Machine Learning Final Project. (<a href="#">TeX</a>)</li> <li>• Sajad Azami, Taher Ahmadi, "Face Recognition With Singular Value Decomposition" - Technical Report for Implementation of <a href="#">this</a> Paper. (<a href="#">TeX</a>)</li> <li>• Sajad Azami, "Image Compression Using Low Rank Matrix Approximation" - Technical Report for Advanced Mathematics Final Project. (<a href="#">TeX</a>)</li> <li>• Sajad Azami, "Fraud Detection Using Game Theory and Data Science" - Technical Report for Research Method and Technical Report Writing course. (<a href="#">TeX</a>)</li> <li>• Sajad Azami, "Report for Project Implemented and Related Questions" - Technical Report for Project Done in Database Lab Course. (<a href="#">TeX</a>)</li> </ul>	
WORK EXPERIENCE	<ul style="list-style-type: none"> <li>◇ Senior Android Developer at <a href="#">Golrang Industrial Group(GIG)</a> <i>Summer 2015</i> <ul style="list-style-type: none"> <li>• <b>Neesa Organizational Bulletin</b> An enterprise generic newsletter for organizations, developed in Android and Django framework.</li> <li>• <b>Daroo Client</b> An enterprise Android application to be used by drugstores to order medicine online.</li> </ul> </li> <li>◇ Android Developer at PANA Software Group <i>Feb 2014 - Jul 2015</i> <ul style="list-style-type: none"> <li>• <b>Darsbarg</b> A well-designed Android application for selling and buying sample questions in order to prepare for exams.</li> <li>• <b>Treep</b> An Android application that I worked on as starter project to improve the application on it's second version.</li> </ul> </li> </ul>	
LECTURES AND PRESENTATIONS	<ul style="list-style-type: none"> <li>◇ <b>Guest Lecturer in 8th Linux Festival</b> <i>Amirkabir University of Technology</i> <i>May 2016</i> <ul style="list-style-type: none"> <li>• Python Workshop</li> <li>• Linux Basic Workshop</li> </ul> </li> <li>◇ <b>Android Workshop for Java Students(2 Sessions)</b> <i>Amirkabir University of Technology</i> <i>Spring 2016</i></li> </ul>	

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:**  $\text{\LaTeX}$ , Vim

EXTRA-CURRICULAR  
ACTIVITIES

- ◇ Participating in AI and Data Mining Online Competitions.(Codes Are Available on My Personal [Github](#))
- ◇ Responsible 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