Sajad Azami **22 March, 1995**

CONTACT
INFORMATION

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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 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 Languge** *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

◇ M. TaherAhmadi, S. Azami, 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.

◇ 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