

POOYA KARIMIAN

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EDUCATION

M.Sc. in Computing Science, August 2007 • **Simon Fraser University**, Canada

Courses: [Recognition Problems in Computer Vision](#) · Computational Biology ·
Computer/Communication Networks · Autonomous Robots · Advanced Computer Graphics.

B.Sc. in Computer Engineering, September 2003 • **Sharif University of Technology**, Iran

TECHNICAL SKILLS

Programming Languages: C/C++, Perl, Python, Java.

Web Development: (X)HTML / CSS / JavaScript, Perl / PHP, XUL / Mozilla platform.

Linux / UNIX: Shell scripts, GNU tools, OS/Kernel, Network programming, Concurrent computing.

Administration: Linux, Windows, IP Networks, Internet-based services, MySQL databases.

Software Management: SubVersion, CVS.

Internationalization: Unicode, Bi-directional text, Localization.

Academic: Matlab, Prolog, LISP.

Control and Electronics: Robotics and AI, Embedded systems, Communication, Verilog HDL.

PROFESSIONAL EXPERIENCES

2008 Senior Software Developer - Web Developer § [Worio](#)

- Worio: developing the web frontend for a tag-based search and recommendation engine.

2007-2008 Software Developer § [Sxip Identity](#)

- Sxipper: A Firefox add-on for managing user's identity information easily and in a secure way. [Sxipper](#) has several features including managing passwords, filling forms, and providing [OpenID](#).

2001-2004 System Developer § [Ghasedak Systems](#)

- Netbill: A multi ISP accounting and professional billing solution. [Netbill](#) is able to tolerate high load and large number of users and offers separate levels of resellers. Customizable at each level and is offered as a Linux-based appliance. Uses RADIUS AAA protocol, consisting of forking daemon, templatable web based interface and backend accounting database.
- Developing dynamic sites such as e-Shops and web portals mostly on Linux-Apache-MySQL-Perl platform.

2003-2004 Web Application Developer § [Iranian Fuel Conservation Organization \(Formerly IIEEO\)](#)

- Suppliers: A web-based application for managing and searching over resources and supplier companies.
- CNG Stations: A web-based application used by Compressed Natural GAS stations to report daily reports of resources and usage data. Extensive data mining and graphical reports and features. This application is now being used nation-wide by all CNG stations.

2001-2003 Web Application Developer § [AICTC](#), Sharif University of Technology

- Automated News Portal: Content fetching and analysis from Internet news sources.
- PDM: A domain monitoring and expiration alerting system.
- Cabinet: Intranet file server and file search engine.

2002-2003 Software Developer § [Olefin Group](#), Chemical Engineering Dept., Tarbiat Modarres University

- Implementation of user interfaces for three chemical process simulators used to simulate chemical reactions in three major Iran petrochemical plants.
- Developing a database for scanning, categorizing and searching research papers.

2003 Web Application Developer § [PeykAsa Group](#)

- The initial development of [Peykasa integrated messaging service](#) web interface, a web to SMS gateway.
- Web interface for Group SMS System.

1999-2003 Administrator § [Computer Engineering Department](#), Sharif University of Technology

- Servers: Samba file server and file search. Simple CMS for handling web pages, web mail, course pages and user homepages.
- Workstations: Authentication and remote management of Windows machines used by near 1000 users on a Linux server using [Samba-TNG](#) as backend.

RESEARCH EXPERIENCES

2004-2006 Researcher § [Autonomy Lab.](#), Simon Fraser University (Supervised by Dr. R.T. Vaughan)

- ChatterBox: A self-maintaining swarm of minimalist robots with audio communication.
- Sounds Good: Simulation and Evaluation of Audio Communication for Multi-Robot Exploration.
- Player/Stage: Open-Source and Free Software tools for robot control and simulation. Different features including an audio propagation simulator was implemented for this package. Developed on [SourceForge](#).
- M.Sc. Thesis: Audio Communication for Multi-Robot Systems.

2005 Research Assistant § [Vision and Media Lab.](#), Simon Fraser University (Supervised by Dr. G. Mori)

- Human Activity Recognition: Building systems that can find human figures in either still images or video sequences, and determine what action they are performing.

2001-2003 Research Assistant § [Robotics and Automation Lab.](#), Sharif University of Technology

- Developing the vision system of Roboshark, a pool player robot (As part a of M.E. Alian M.Sc. Thesis. Supervised by Dr. S. Bagheri Shouraki and Dr. M. T. Manzuri).
- Member of [Sharif CESR](#) research group working on a small sized soccer playing robots team. Our research focused on different aspects of robotics: Image Processing and Machine Vision, Multi Object Tracking for fast moving objects, Path Planning, Pattern Matching, Simulation and Prediction, Noise Filtering, Multi Agent Systems, Network Communication, Decision Making, Neural Networks (Supervised by Dr. M. T. Manzuri).
- Participated in [Robocup](#) 2001, Seattle and Robocup 2002, Fokouka, Japan as a member of Sharif CESR team.
- Member of SharifII (ParsAI) research group working on a robot soccer simulation team. Our research focused on: Multi Agent Systems, Planning, Machine Learning, and Behavior Based Robot Simulation.

2002 Contestant § [First Sharif FPGA Design Contest](#)

- Design and Implementation of a Game Device: a game specific processor and graphics engine. Simulated and synthesized in Verilog HDL and implemented on an Altera FPGA.
- Awarded best technical report for design of “Standalone Gaming Machine”.

TEACHING EXPERIENCES

- Teaching Assistant: Operating Systems, Distributed Systems, Web Information Systems
- Lecturer: Computer lab. Linux, HTML and Web courses
- Presenter: “Sounds Good” paper in IROS 2006 China, “PHP and MySQL” and “GNU/Linux” in First and Second Iranian Linux Users Gatherings

PUBLICATIONS

- [1] Pooya Karimian. “[Audio Communication for Multi-Robot Systems](#)”. M.Sc. Thesis. School of Computing Science, Simon Fraser University. August 2007.
- [2] Pooya Karimian, Richard T. Vaughan, Sarah Brown. “[Sounds Good: Simulation and Evaluation of Audio Communication for Multi-Robot Exploration](#)”. Proceedings of the IEEE/RSJ Int. Conf. on Intelligent Robot and Systems (IROS 2006), Beijing, China. 2006.
- [3] Mohammad Ebne Alian, Saeed Bagheri Shouraki, M.T. Manzuri Shalmani, Pooya Karimian, Payam Sabzmeydani. “[Roboshark: a Gantry Pool Player Robot](#)”. Proceedings of 35th International Symposium on Robotics, Paris. 2004.
- [4] Pooya Karimian, Payam Sabzmeydani. “[Implementation of a Color-based Fast Object-tracking System from Video Frames in a Robotic Environment](#)”. B.Sc. Thesis. Computer Engineering Department, Sharif University of Technology. September 2003.
- [5] Mohammad Taghi Manzuri, Pooya Karimian, Mehran Motamed, Roozbeh Mottaghi, Payam Sabzmeydani, Reza Taghipour. “[Sharif CESR Small Size Robocup 2002 Team](#)”. RoboCup 2002: Robot Soccer World Cup VI, The 2002 International Robocup Symposium Proceedings, Fukuoka, Japan . June 2002. 444.
- [6] Mohammad Taghi Manzuri, Hamid Reza Chitsaz, Reza Ghorbani, Pooya Karimian, Alireza Mirazi, Mehran Motamed, Roozbeh Mottaghi, Payam Sabzmeydani. “[Sharif CESR Small Size Robocup Team](#)”. RoboCup 2001: Robot Soccer World Cup V, Lecture Notes in Computer Science 2377 . Springer-Verlag. 2002. 595.
- [7] Jafar Habibi, Ehsan Foroughi, Mehran Motamed, Pooya Karimian, Hamed Hatami, Hossein Fardad. “[SharifII Soccer Simulation Team](#)”. RoboCup 2000: Robot Soccer World Cup IV, Lecture Notes in Computer Science 2019 . Springer-Verlag. 2001. 437.