Pooya Karimian

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EDUCATION

M.Sc. in Computing Science, August 2007 • Simon Fraser University, Canada
B.Sc. in Computer Engineering, September 2003 • Sharif University of Technology, Iran

TECHNICAL SKILLS

Programming Languages: C / C++, Javascript / Node.js, Python, Perl / PHP, Objective-C, Java.

Databases: MySQL, Cassandra, ZooKeeper, Riak.

Platforms: Mobile: iOS / iPhone / iPad / WebOS, Cloud: AWS / EC2, Linux, Mac OS X.

Web Development: HTML / CSS, JavaScript, Apache / Nginx, XUL / Mozilla Platform, WebKit.

Software Management: Git / GitHub, SVN, CVS, PivotalTracker / Bugzilla / Trac / JIRA.

Internationalization: Unicode, Bi-directional Text, Localization.

Academic Tools and Languages: Matlab, Prolog, LISP.

Computer Science: Algorithms, IP Networks, Distributed Computing, AI, Robotics.

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

PROFESSIONAL EXPERIENCES

2012-Present **Senior Software Engineer** § Sencha Inc. (Cloud Services Team)

- Sencha.io: A complete cloud platform for building mobile web applications. Offering services such as authentication, data sync, messaging, image and deployment. Sencha.io makes is easy to create scalable yet simple to create applications in the Cloud. The platform is built as a mix of an API and a SDK using new technologies such as Node.js, Cassandra, ZooKeeper, RabbitMQ and WebSockets. As member of the cloud team I am in charge of backend services including data synchronization and distributed coordination services.

2008-2012 **Lead Frontend Developer** § Zite (formerly Worio, Acquired by CNN)

- Zite: One of the only four developers of Zite Personalized Magazine for iPad. As the frontend lead, I implemented the architecture of the iPad app, in near four months, using a hybrid of Objective-C, Javascript and HTML5 on the frontend and Python code on the web server side. Zite was an instant hit with 120k downloads in just one week after its release. Since then, it has been constantly growing and getting featured in media. Turner/CNN acquired Zite in August 2011.
- Worio: Developing the web frontend and browser plugins for Worio Discovery Engine: a tag-based search and recommendation service on top of web search. The server side web framework is a multithreaded and pipelined templating system.

2007-2008 **Software Developer** § Sxip Identity

- Sxipper: A secure Identity and Password Manager as a browser add-on. Sxipper offered several features including managing passwords, filling forms, and providing OpenID inside a browser while collecting crowd-sourced training data for form filling. Coded using XUL, HTML and Javascript on top of Mozilla platform and occasional Perl code for server side.
- Sxip Social: A prototype for future of Sxipper as an identity manager and social assistant integrated into web browsing, developed in only one month. Consisted of Javascript crawlers and data storage inside the browser itself and UI to show the aggregate results based on the current website context.

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.

2003-2004 **Web Application Developer** § Iranian Fuel Conservation Organization (Formerly IEEO)

- Suppliers: Web-based application for managing and searching over resources and supplier companies.
- CNG Stations: Web-based application used by Compressed Natural Gas stations for daily reports of resources and usage data. Extensive data mining and graphical reports and features for nation-wide gas stations.

2001-2003 **Application Developer** § Sharif University Affiliated Company

- The interface to an integrated messaging service for a web to SMS gateway, think of it as Twilio. I also developed the web interface for a Group SMS System that can be used by kinds of banks and ad agencies.

- PDM: A domain registration (DNS), management, monitoring and expiration alerting system.
- Automated News Portal: Content fetching and analysis from Internet news sources for a topic based news portal in entertainment and cinema news. In Perl and consisted of modular scrapers for each news source.
- 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 service for scanning, categorizing and searching research papers. PC software directly interfacing with scanner and PHP/MySQL based software

1999-2003 **Administrator** § Computer Engineering Department, Sharif University of Technology
- Servers: File server and search engine. CMS for handling web pages, web mail, course and user pages.
- 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 running Linux.
- Sounds Good: Simulation and Evaluation of Audio Communication for Multi-Robot Exploration.
- Player/Stage: Audio propagation simulator for this Open-source robot control and simulation tool.
- 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".

Publications

[1] P. Karimian. "Audio Communication for Multi-Robot Systems". M.Sc. Thesis. School of Computing Science, Simon Fraser University. August 2007.

[2] P. Karimian, R.T. Vaughan, S. 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] M.E. Alian, S. Bagheri Shouraki, M.T. Manzuri Shalmani, P. Karimian, P. Sabzmeydani. "Roboshark: a Gantry Pool Player Robot". Proceedings of 35th International Symposium on Robotics, Paris. 2004.

[4] P. Karimian, P. 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] M.T. Manzuri, P. Karimian, M. Motamed, R. Mottaghi, P. Sabzmeydani, R. 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] M.T. Manzuri, H.R. Chitsaz, R.Ghorbani, P. Karimian, A. Mirazi, M. Motamed, R. Mottaghi, P. 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] J. Habibi, E. Foroughi, M. Motamed, P. Karimian, H. Hatami, H. Fardad. "SharifII Soccer Simulation Team". RoboCup 2000: Robot Soccer World Cup IV, Lecture Notes in Computer Science 2019 . Springer-Verlag. 2001. 437.