Hesam Alizadeh

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Summary of Qualifications

- Proficient C++, Java and JavaScript developer, experienced in design and programming of systems in wide variety of areas
- Proven communication and interpersonal skills with extensive experience in collaboration, presentations (public speaking) and writing in professional environments
- Effective performance in multi-disciplinary, fast-paced and team-oriented environments. Participated in planning and organization of several student activities
- Strong understanding of a wide variety of machine learning techniques and their applications to robotics
- Proficient in a variety of user research methods including in-lab usability studies, controlled laboratory experiments, field studies, individual and group interviews, and surveys

Education

2013 - Aug. 2016	M.Sc. **Human Computer Interaction**, University of Calgary, Calgary, Canada Advisors: Tony Tang, Ehud Sharlin *Thesis: Embodiments for Joint Remote Exercise*
2010 - 2013	M.Sc. **Machine Intelligence and Robotics**, University of Tehran, Tehran, Iran Advisors: Hadi Moradi, Majid Nili Ahmadabadi *Thesis: Learning from Sparse Demonstrations: An Application to Air Hockey*
2005 - 2010	B.Sc. **Software Engineering**, University of Tehran, Tehran, Iran

Technical Skills

Languages	Java, C, C++, C#, JavaScript, HTML5
Web	CSS3, Node.js, AngularJS, jQuery, Express.js, Apache-Wicket, Apache-Tomcat
Operating Systems	Windows, Linux
Other	MySQL, MongoDB, Maven, JUnit, OpenCV, Java Swing, WPF, Git, Gephi, Latex

Professional Experience

Research Intern **March. 2016 - Aug. 2016**
SMART Technologies, Calgary, Canada

- Responsible for iterative design and prototyping of an interactive classroom warm-up tool
- Interviewed several teachers to understand warm up routines in the classrooms

Research Assistant **Sept. 2013 - Aug. 2016**
University of Calgary, Calgary, Canada

- Designed a remote dancing system and implemented it using C# and WPF. Gained experience with Vicon Motion Capture System used for tracking dancer's body and Node.js used for transferring the tracking data
- Used several HCI methodologies including User-Centered Design, Observational Experiment, Usability Evaluation, Ethnography, and Interviewing

Research Assistant **Sept. 2010 - Aug. 2013**
University of Tehran, Tehran, Iran

- Researched and developed a learning algorithm for a simulated air hockey playing robot in Matlab and C++ enabling the robot to learn performing accurate shots by performing few sample shots
- Designed and built a real-time air hockey playing robot in collaboration with a mechanical engineer using image processing techniques for tracking the puck movement implemented in C++ and OpenCV

Software Developer **May. 2009 - Sept. 2009**
Payame Noor University, Tehran, Iran

- Member of the social network development team, in charge of UX design and front-end development
- Responsible for defining Use Case Scenarios and web development in Java using Apache Wicket, Java Hibernate, HTML5/CSS3, and JS

Teaching Experience

Teaching Assistant **Sept. 2013 - present**
University of Calgary, Calgary, Canada

- *Human Computer Interaction*: Taught basics of WPF programming in Visual Studio and Expression Blend, reviewed student projects and provided feedback throughout the design process
- *Introduction to Computer Science I & II*: Taught programming concepts including Object Oriented programming in Java and Python to the students, marked course assignments and exams, and provided students with step-by-step feedback throughout the design process

Teaching Assistant **Fall. 2008 - Winter 2012**
University of Tehran, Tehran, Iran

- *Social Network Analysis*: Designed and graded assignments, taught social network analysis concepts and tools including Gephi
- *Artificial Intelligence*: Taught artificial intelligence concepts, held problem solving classes, and supervised student projects submitted in Java
- *Introduction to Computer Science*: Taught programming concepts in C++ to the students and marked course assignments and exams

Relevant Experience

Computer Supported Collaborative Work Course Project **Fall 2013**
Graduate Computer Science Course, University of Calgary

- *Haptics in Remote Collaborative Exercise Systems for Seniors*: Designed and implemented a remote arm exercise system simulating assistive pushing and pulling of the limbs using haptic feedback

Social Network Analysis Course Project **Winter 2013**
Graduate Computer Science Course, University of Tehran

- *Opinion Formation by Competing Informed Agents*: Researched and developed opinion formation strategies used by two groups of competing informed agents to shift the society's opinion toward their desired direction

Advanced Robotics Course Project **Fall 2011**
Graduate Computer Science Course, University of Tehran

- *Localization of A Mobile Robot*: Implemented the particle filter algorithm for a mobile robot in C++. The robot could localize itself in a real world map using its IR sensors

Publications

GI 2016	**Alizadeh, H.**, Witcraft, A., Tang, A., and Sharlin, E. "HappyFeet: Embodiments for Joint Remote Dancing." In Graphics Interface 2016.
CHI 2014	**Alizadeh, H.**, Tang, R., Sharlin, E., and Tang, A. "Haptics in remote collaborative exercise systems for seniors." In CHI'14 Extended Abstracts on Human Factors in Computing Systems.
CHI 2014	Tang, R., **Alizadeh, H.**, Tang, A., Bateman, S., and Jorge, J. A. "Physio@Home: Design explorations to support movement guidance." In CHI'14 Extended Abstracts on Human Factors in Computing Systems.
ICRoM 2013	**Alizadeh, H.**, Moradi, H., Ahmadabadi, M.N. "Automatic calibration of an air hockey robot." In Robotics and Mechatronics (ICRoM) 2013.

Volunteer Activities

VP Calgary Persian Library **2015**
University of Calgary, Calgary, Canada

- Organized several cultural events including charity events, book clubs, and poetry reading clubs

Student Volunteer **May 2014**
ACM CHI 2014, Toronto, Canada

- Coordinated organizational duties