Sina Mohseni

Visual Analytics · Human Computer Interaction

Langford Center, B208, 3137 TAMU, College Station, Texas 77840

(+1) 541-745-8849 | sina.mohseni@tamu.edu | http://people.tamu.edu/ sina.mohseni/ | sinamohseni | sina-mohseni

Summary

- Computer science PhD student and graduate research assistant with 5 years experience in visual analytics designs, human-computer interaction research, computer vision systems and optimization algorithm.
- Experienced researcher with strong analytical skills. Keen ability to identify problems and basic principle reasoning approach in designing and developing solutions.

Education

Texas A&M University

College Station, Texas

Computer Science Ph.D. Student — *Sept. 2016 - PRESENT*

- Graduate Research Assistant - working with Dr. Eric Ragan

Babol Noshirvani University (NUT)

Babol, Iran

B.S. in Electronic Engineering — *Sept. 2012 - 2014*

- Thesis: Facial Expression Recognition Based on Anatomy of Face

University of Isfahan

Isfahan, Iran

B.Sc. in Electrical and Electronic Engineering — *Sept. 2007 - 2011*

Professional Experience

Graduate Research Assistant at Texas A&M University

College Station, Texas

"Explainable Artificial Intelligence", DARPA Research Grant — *Aug. 2017 - Present*

- Preparing an online human-grounded *evaluation benchmark* for local explanations generated from text and image interpretable classifiers. (Javascript, Python)
- Designing and performing user studies to evaluate machine learning explanation quality's effect in user's trust. (Javascript)
- Designing and performing user studies to evaluate interpretable machine learning's efficacy in real-world cases. (Javascript)

"Analytic Provenance Visualization and Segmentation", NSF Research Grant. — *Sept. 2016 - Present*

- Designed and implemented a user interaction logs clustering method and visualization for analytic provenance retrieval in text analysis. (D3.js, Gensim, Python)
- Developed a novel segmentation technique and visualization for user interaction segmentation in analytic provenance. (D3.js, Gensim, Python)
- Published an online analytic provenance data set: including user interaction logs and coded data for 24 participants.

Graduate Research Assistant at Oregon State University

Corvallis, Oregon

Shrinkage Factor CAD Automation Toolbox, Center for e-Design Grant — *Jan. 2016 - Aug. 2017*

- Implemented a design automation toolbox for CAD kernels which applies shrinkage factors in investment casing at Design Engineering Lab with Prof. Matt Campbell. (C#)

Graduate Teaching Assistant (Grad level Computer Architecture), Department of Computer Science and Engineering

Graduate Research Assistant at Babol Noshirvani University

Babol, Iran

"Competition Over Resource: A new Metaheuristic Optimization Algorithm" — *Jan. 2014 - Aug. 2015*

- Designed and implemented a new metaheuristic optimization algorithm based on competitive behavior of animal groups. This work was done at Digital Signal Processing Lab and resulted in five peer-reviewed papers. (Matlab)

"Facial Expression Recognition" — *Sept. 2013 - Dec. 2014*

- Developed a Facial Expression Recognition System Based on Anatomical Structure of Human Face at Digital Signal Processing Lab. Resulted in my MSc. thesis and four peer-reviewed papers. (Matlab)

Skills

Technical Skills

Languages:	Python, JavaScript, R, MATLAB, C++, C#.
Machine learning:	SciPy, Scikit-learn, OpenCV, Gensim.
Data visualization:	D3.js, ggplot2, Matplotlib.
HCI:	Contextual Design, Heuristic Analysis, Interaction Logs Analysis, Empirical Methods and Statistical Analysis, Behavioral Data Coding, Think Aloud.

Core Competence

Research:	Excellent in problem solving, creative thinking and evaluation of the literature.
Communication:	Skillful in written, verbal and interpersonal communications.
Leadership:	Excellent in creating vision, motivating others and delegating responsibilities.

Patents

Insulator Leakage Current Monitoring and Alarm System in Power transmission Systems — *Iran*

National Patent, IRP/ 021579 — *Summer 2014*

Blood Pressure Monitor Calibrating Device and Corresponding Method — *Euro-PCT*

European Patent, Publication Number: WO2014060012 A1 — *Spring 2010*

Honors & Awards

Golestan Province Power Distribution Co. — *Gorgan, Iran*

Research Grant (PI), "Insulator Leakage Current Monitoring and Alarm System in Power Transmission Systems" — *Oct. 2014 - Aug. 2015*

- Lead engineer on design and execution of project along with our power engineer who conducted several hot-line tests for device accuracy. Gained expertise in project management and problem solving.
- Researched and developed a creepage current meter device which measures micro ampere current from ceramic power transmission insulators. Implemented the overall system with analog differential LNA and digital signal processing.

Isfahan Province Regional Power Distribution Co. — *Isfahan, Iran*

Research Grant (Co-PI), "Study on Effects of CFL Lamp on Power Distribution System" — *Mar. 2011 - Sept. 2011*

- Lead Researcher execution of project along with a team member who conducted current harmonic data capture for the study. Learned proposal writing and micromanagement skills.
- Researched current harmonic effects on power distribution system. Performed harmonic analysis and simulations for combination of CFL lamps in Matlab.

Publications

Journal Papers

[1] Gholami, R., Zakeri, B., Abedi, H., & **Mohseni**, S. (2016). Reduction of Dynamic Range Ratio through Competition Over Resources to synthesize planar array antennas. AEU-International Journal of Electronics and Communications, 70(11), 1522-1531.

Selected Conference Papers

[1] **Mohseni, S.**, Pena, A., Ragan, D., E.,(2017). ProvThreads: Analytic Provenance Visualization and Segmentation. Poster Presentation at IEEE Visual Analytics Sience and Technology (VAST) 2017.

[2] **Mohseni, S.**, Zarei, N., and Ramazani, S.. "Facial expression recognition using anatomy based facial graph." Systems, Man and Cybernetics (SMC), 2014 IEEE International Conference on. IEEE, 2014.

[3] **Mohseni, S.**, Gholami, R., Zarei, N., & Zadeh, A. R. (2014, September). Competition over resources: a new optimization algorithm based on animals behavioral ecology. In Intelligent Networking and Collaborative Systems (INCoS), 2014 International Conference on (pp. 311-315). IEEE.