

# Faezeh Tafazzoli

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## Research Interests

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My main focus is on Computer Vision and Machine Learning. I am interested in object detection and recognition from 2D images or videos, fine-grained classification, content-based image retrieval and deep vision. My current research focus is on recognizing make and model of the vehicles in security images or video footages.

## Research and Work Experience

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<b>PARC</b> Research scientist Intern, Video and Image Analytics Lab Automatic Detection and Quantification of Human Gait Abnormalities	May 2015-December 2015 Webster, NY
<b>Xerox Innovation Group (XRCW)</b> Research scientist Intern Automatic Visual Remote Assessment of Movement Symptoms in People with Parkinson's Disease	May 2014-August 2014 Webster, NY
<b>Eye-Com Corporation</b> Software developer Intern Wrapping an exhaustive library in Eye Tracking	May 2011-September 2011 Reno, NV
<b>Razin Software Group</b> Co-founder and CEO, Head of programming team Analysis, Design and Implementation of Windows/Web applications	February 2006-June 2010 Tehran, Iran
<b>Iram Tech Co. (ITC)</b> Software developer Design and Implementation of a Network-based system for "Conseil des notaires et clerks de notaries", based on 5-layered architecture	May 2005-October 2005 Tehran, Iran

## Education

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<b>Doctor of Philosophy in Computer Science</b> , University of Louisville Thesis: "Vehicle Make and Model Recognition for Intelligent Transportation Monitoring" Advisor: Dr. Hichem Frigui      GPA: 4.0	Aug. 2012-March 2017
<b>Master of Science in Computer Science</b> , University of Nevada, Reno Thesis: "Feature Selection Using Genetic Algorithms for Human Gait Recognition" Advisor: Dr. George Bebis      GPA: 4.0	Aug. 2010-May 2012
<b>Master of Science in Computer Engineering</b> , Amirakabir University of Technology, Tehran, Iran Thesis: "Model-Based Human Gait Recognition" Advisor: Dr. Reza Safabakhsh      GPA: 16.5 out of 20	Sept. 2005-May 2008
<b>Bachelor of Science in Computer Engineering (Software)</b> Azad University, Central, Tehran, Iran	Sept. 2000-July 2004

## Publications

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- **Vehicle Make and Model Recognition Using Local Features and Logo Detection**, F. Tafazzoli, H. Frigui, ISIVC 2016
- **Saliency-based Multiple Instance Framework for Vehicle Make and Model Recognition**, F. Tafazzoli, A. Panicker, H. Frigui, WiCV 2016
- **EmotiGO: Bluetooth-enabled Eyewear for Unobtrusive Physiology-based Emotion Recognition**, M. N. Saadatzi, F. Tafazzoli, K. C. Welch and J. Graham, IEEE Conference on Automation Science and Engineering, August 2016
- **Genetic Feature Selection for Gait Recognition**, F. Tafazzoli, G. Bebis, S. Louis and M. Hussain, Journal of Electronic Imaging, February 2015
- **Improving Human Gait Recognition Using Feature Selection**, F. Tafazzoli, G. Bebis, S. Louis and M. Hussain, Advances in Visual Computing (ISVC) 2014

- **Event Recommendation Engine Challenge**, F. Tafazzoli and M. Badami, Ky-triwick, February 2014
- **Novel System Identification Method and Multi-objective-optimal Multivariable Disturbance Observer for Electric Wheelchair**, M. N. Saadatzi, J. Poshtan, M. S. Saadatzi and F. Tafazzoli, ISA Transactions, 2012
- **Model-Based Human Gait Recognition Using Leg and Arm Movements**, F. Tafazzoli and R. Safabakhsh, Engineering Applications of Artificial Intelligence, December 2010
- **Visual Perception of Human GAIT and a Model for its Identification**, F. Tafazzoli and M. N. Saadatzi, Int. Conference on Computer Vision Theory and Applications, May 2010

## Patents

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- **Automatic Visual Remote Assessment of Movement Symptoms in People with Parkinson's Disease for MDS-UPDRS Finger Tapping Task**, F. Tafazzoli, B. Xu, H. Wu and R. Loce, US Patent #20160089073, March 2016
- **Automatic Front-View Gait Segmentation for Abnormal Gait Quantification**, F. Tafazzoli, B. Xu, W. Wu and R. Loce, Pending US Patent

## Relevant Academic Research

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Kaggle Event Recommendation System Challenge  
 Cluster Analysis on Louisville Open Dataset, The Crime and ABC License Data  
 Feature Selection in Human Face Categorization  
 Eye Blink Tracking

## Teaching Experience

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**UofL:** Data Structures (CECS 302), Algorithms (CECS 419/619), Introduction to Programming Languages (C/C++) (CECS 130), Introduction to Computer Science (CECS 230/231)  
**UNR:** Computer Science I (CS 135), Introduction to Computer Science (CS 105), Computer Methods for Engineers (CS 241)

## Technical Skills

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**Programming Languages:** MATLAB, C++/C (OpenCV & OpenGL libraries), VB.Net  
**Deep Learning Libraries:** Torch  
**Application Software:** Microsoft Visual Studio .Net, Machine learning tools such as WEKA and R

## Honors/Awards

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NSF Innovation-Corps Award, UofL, February and August 2016  
 Women in Computer Vision Scholarship, CVPR, 2016  
 CSE Doctoral Award, UofL, 2016  
 Martha & Frank Diebold Award, UofL, 2016  
 1st place Graduate Research Award, 101st Kentucky Academy of Science, 2015  
 Speed Up Entrepreneurial Program Award, UofL, 2015  
 Best Poster, UofL Graduate Research Symposium, 2014  
 Best Graduate Poster Award, ACM-W, Ky-triwick, 2014  
 Grace Hopper Scholarship, 2014, 2015  
 CRA-W Graduate Cohort Scholarship, 2013  
 Iran Telecommunication Research Center Grant on MS Thesis, AUT, 2007

## Referee/Reviewer

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IEEE Transactions on Fuzzy Systems / Electronic Letters / Iranian Computer Vision and Image Processing Journal

## Affiliations

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Member of IEEE and IEEE Computer Society  
 Member of Society of Women Engineers (SWE)