

NASIM SOULY

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Skills Summary

- Computer Vision, Image and Video processing, Deep Learning and Machine Learning algorithms
- Programming: Python, C/C++, MATLAB, C#, JAVA
- Database: MySQL, MS SQL Server,
- Others: Linux, Git, CPLEX, Gurobi, OpenCV, Docker

Experience

Nov 2017- Now DigitalOcean Cloud Computing, Research Scientist

- Digital Asset management in storage using visual search and object detection in images
- User-Process Segmentation

Aug 2011- Nov 2017 Center for Research in Computer vision (CRCV) at University of Central Florida (UCF)

- Graduate Research Assistant in CRCV, UCF
- Graduate Teacher Assistant in Computer Science department (Object Oriented Programming course), UCF
- Design and Develop Machine Learning Algorithms using MATLAB, Python and C++ to solve computer vision problems.
- Using Deep learning frameworks (Caffe, Chainer, Torch) in computer vision applications (semantic segmentation, recognition and detection)

May 2010 –July 2011 Tosan Intelligent Data Miners , Software Engineer

- Designing & Developing Data Warehouse
- Data Clustering and Data Mining C#.NET

Aug 2006- May 2010 Nebras Informatics, Software Developer

- Designing & Developing Customer Relationship Management Software, C# windows application.
- Work flow Management (C#.NET ,.NET Remoting, MsSQL Server)

Projects

- Action Recognition in unconstraint videos using kinematic features and sparse representation, DARPA funded project.
- Object detection and segmentation in images using DPM model and saliency detection with Markov Random Field DARPA funded project.

- Saliency Detection in Videos DARPA funded project.
- Semantic Segmentation using Random Forest and Constraint Modeling.
- Image and EEG data classification using Convolutional Neural Network (Caffe) and Recurrent Neural Network (LSTM in Torch).
- ATR (detection, super-resolution and recognition) in IR videos using deep learning Lockheed Martin funded project.
- Semantic Segmentation Using GAN (Chainer/Theano framework)

Publications

- Nasim Souly, *Concetto Spampinato and Mubarak Shah*, **Semi Supervised Semantic Segmentation Using Generative Adversarial Network**, Published in ICCV 2017
- *Concetto Spampinato, Simone Palazzo, Isaak Kavasidis, Daniela Giordano, Nasim Souly and Mubarak Shah*, **Deep Learning Human Mind for Automated Visual Classification**, Published (Oral presentation) in CVPR 2017.
- Nasim Souly and *Mubarak Shah*, **Scene Labeling Through Knowledge-Based Rules Employing Constrained Integer Programming**, Submitted to CVIU, <https://arxiv.org/abs/1608.05104>
- Nasim Souly and *Mubarak Shah*, **Scene Labeling Using Sparse Precision Matrix**, Published in CVPR 2016.
- N Souly, *G Z Papadakis; U. Teomete, U Bagci.*, **A New Saliency Metric for Precise Denoising PET Images for Better Visualization and Accurate Segmentation**, oral presentation RSNA 2015.
- Nasim Souly and *Mubarak Shah*, **Visual Saliency Detection Using Group Lasso Regularization in Videos of Natural Scenes**, Published in Int Journal of Commuter Vision (IJCV), August 2015.
- *Subhabrata Bhattacharya, Nasim Souly and Mubarak Shah*, **Covariance of Motion and Appearance Features for Spatio Temporal Recognition Tasks**, arXiv:1606.05355, 2013
- Nasim Souly and *Reza Safabakhsh*, **Human Recognition using Face Profile and Ear based on Active Shape Model and Linear Discriminate Analysis**, Published in 14th Iranian Conference on Computer Engineering, Amirkabir University, 2009.
- Nasim Souly and *Saeid Shiry*, **Texture Classification Using SVM Fusion**, Published in 16th Iranian Conference on Electrical Engineering, Tarbiat Modares University Tehran, 2008.

Education

- **PhD in Computer Science**
University of Central Florida
Thesis: Saliency Detection and Semantic Segmentation
- **Master of Science Degree in Artificial intelligence**
Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran.
Thesis: Human recognition using face and ear images.
- **Bachelor of Science Degree in Software Engineering**
Iran University of Science and Technology (Elm-o-Sanat), Tehran, Iran.
Thesis: Intelligent analytical reporting using OLAP and Data warehousing