



Europass Curriculum Vitae



Personal information

Surname(s) / First name(s) **Ghaffari-Hadigheh, Habib**
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Email(s) ghaffh1@mcmaster.ca
Nationality(-ies) Iranian
Date of birth 8 Jul, 1983

Education

Master **Master of Science(Computer Science), Universiti Teknologi Malaysia (UTM)**
Graduated on August 2014
GPA:3.71/4.0

Research Interests

Signal Processing
Computer Graphics
Machine Learning
Optimization
Data Mining

Research Experiences

2006

My bachelor Project

The project was about a kind of sensitivity analysis in linear programming. We supposed that the optimal partition of the linear problem is known and there are perturbation on the rim data. This project was based on the Chapter 19 of the book "*Interior Point Methods for Linear Optimization, by Roos, C., Terlaky, T. and Vial, J.-Ph*". I implemented all of the algorithms in this chapter and realized the differences between the traditional point of view which has been based on having a basic optimal solution.

2011

Cellular Automata and its applications

The project was belong to advance theory of computer science. During the project cellular automata studied and some of its applications in image processing, route planing and cryptography was introduced. For better understanding of project concept some implementation down based on the introduced algorithms.

2011-2012

Use of Artificial Intelligent in Reflexology

The project was belong to the advanced Artificial Intelligent course. The aim of the project was to study the relation of reflexology.

2012-2013

Fuzzy web-based image retrieval system

The project was belong to advanced database course. Project is a web based image retrieval system that get image as an input and return similar images based on color and segments similarity. It also let users to improve the search results by choosing the choosing the unrelated images. Information such as color spaces, image histogram, image quantization, image segmentation, edge detection, object extraction, fuzzy logic, image retrieval were studied during the project. Final result presented with a complete report and a web-based image retrieval sample web-site.

2013-2014

Feature Base Fusion for Splicing Forgery Detection Based on Neuro Fuzzy(As master Dissertation)

Most of researches on image forensics have been mainly focused on detection of artifacts introduced by a single processing tool. They lead in the development of many specialized algorithms looking for one or more particular footprints under specific settings. Naturally, the performance of such algorithms are not perfect, and accordingly the provided output might be noisy, inaccurate and only partially correct. Furthermore, a forged image in practical scenarios is often the result of utilizing several tools available by image-processing software systems. Therefore, reliable tamper detection requires developing more powerful tools to deal with various tempering scenarios. Fusion of forgery detection tools based on Fuzzy Inference System has been used before for addressing this problem. Adjusting the membership functions and defining proper fuzzy rules for attaining to better results are time-consuming processes. This can be accounted as main disadvantage of fuzzy inference systems. In this paper, a Neuro-Fuzzy inference system for fusion of forgery detection tools is developed. The neural network characteristic of these systems provides appropriate tool for automatically adjusting the membership functions. Moreover, initial fuzzy inference system is generated based on fuzzy clustering techniques. The proposed framework is implemented and validated on a benchmark image splicing data set in which three forgery detection tools are fused based on adaptive Neuro-Fuzzy inference system. The outcome of the proposed method reveals that applying Neuro Fuzzy inference systems could be a better approach for fusion of forgery detection tools.

Teaching Experiences

- Instructor** Work as an instructor for the "Advanced Programming" course's computer Lab, helping students to understand the concepts of the course and implement some basic C++ programs themselves - 2004.
- Instructor** Introduction to Latex and its applications (International Student Center (ISC)-University Technology Malaysia (UTM) - 2013.
- Instructor** Introduction to Latex and its applications (International Student Center (ISC)-University Technology Malaysia (UTM) - 2014.

Professional Experiences

- 2004-2005** Danesh Afzaye Farivarean IT Co., Tabriz, Iran Software Engineer
- 2005-2006** Azarbaijan University of Tarbiat Moallem (current name: Azarbaijan Shahid Madani University), Tabriz, Iran *Design, Development and Management of 37Th Annual Mathematic Conference Official Web Site*
- 2006-2008** Emrouz Advertising Center., Tabriz, Iran IT Manager
- 2008-2010** Pouya Andishan IT Co. , Tabriz, Iran
- Directing and working with a 7-member team to develop a group of web-based systems such as Eshop, Office Automation Systems and Websites
- 2015-2016** Elegance Studio Advertisement Agency. , Tabriz, Iran, Lead Web Programmer

Technical Skills

- Bibliographic Database JabRef, EndNote, Zotero
Information management and data analysis Microsoft Excel, Python
- Text Processors Microsoft Word, Libre Office
Text Editing Softwares WinEdt, TexMaker
- Programming Languages Matlab, Java, C#, Python

Publication

Works in progress

- Deep Learning, A systematic Mapping Study
- Feature Base Fusion for Splicing Forgery Detection Based on Neuro Fuzzy

Published Papers

- Bi-Parametric Optimal Partition Invariancy Sensitivity Analysis in Linear Optimization, (Joint Work with A. Ghaffari-Hadigheh and T. Terlaky), *Central European Journal of Operations Research*, (2008) 16:215-238

Conferences

- 2006** Azarbaijan University of Tarbiat Moallem (current name: Azarbaijan Shahid Madani University), Tabriz, Iran *Design, Development and Management of 37Th Annual Mathematic Conference Official Web Site*