

# Rabia Masood

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## OBJECTIVE

To achieve Professional Excellency by becoming part of a prestigious and dynamic organization, where I could make an effective contribution in a successful, end user focused. I have the ability to work productively as a team player and can undertake the role of a competent leader. I am very organized and my work has always been acknowledged as neat, clear, concise and on-time.

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## PERSONAL DATA

FATHER'S NAME : MUHAMMAD YOUSAF  
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## SUMMARY OF QUALIFICATIONS

### **M.S (CS) (2013-2015)**

GPA: 3.5

SZABIST, Islamabad, Pakistan

### Courses in MS

1. Research Methodology
2. Advance Analysis of Algorithm
3. Advance Operating System
4. Advance Computer Architecture
5. Theory of Computation
6. Digital Image Processing
7. Advance Artificial Intelligence
8. Mobile & Wireless Communication
9. Cryptography

### Research Work

IS-1: Plant Disease Segmentation by Digital Image Processing

IS-2: Plants Leaves Classification by PSO and PNN

## **Research Areas**

- 1: Artificial Intelligence**
- 2: Image Processing**
- 3: Pattern Recognition**

## **Research Publications**

- 1. Plant Disease Segmentation by Digital Image Processing in IJMECS.**  
<http://www.mecspress.org/ijmeecs/ijmeecs-v8-n1/IJMECS-V8-N1-4.pdf>
- 2. Plants leave Classification by Particle Swarm Optimization and Probabilistic Neural Network, sent to journal.**

### **MCS (2003-2004)**

GPA: 3.49

NUML, Islamabad

### **BCS (2000-2002)**

GPA: 3.89

Al-Khair University, Islamabad (Recognized)

### **F.Sc (1996-1998)**

Marks: 648/1100

IMCG F-10/2, Islamabad

### **Metric (1995-1996)**

Marks: 635/850

St. Joseph High School, Kohat.

## **WORK EXPERIENCE**

**National University of Modern Languages Islamabad**

**Aug 2007 – to date**

Program Coordinator (Aug 2007-Aug 2010)/Lecturer (Aug 2009- to Date)

### **Job Responsibilities:**

- Delivering lectures, seminars and tutorials.
- Developing and implementing new methods of teaching to reflect changes in research.
- Designing, preparing and developing teaching materials.
- Assessing students' coursework.
- Setting and marking examinations.
- Supporting students through a pastoral/advisory role.
- Undertaking personal research projects and actively contributing to the institution's research profile.
- Completing continuous professional development (CPD) and participating in staff training activities.
- Carrying out administrative tasks related to the department, such as student admissions, induction programs and involvement in committees and boards.
- Managing and supervising staff - at a senior level this may include the role of head of department.

## **FINAL DEGREE PROJECT**

### **Plants Leaves Classification by PSO (Particle Swarm Optimization)**

In this paper I have proposed a model for plants leaves classification in an accurate and timely manner. I have chosen plants leaves from Flavia Database and performed my experiments on it. From Literature Review it was clear to me that the basic problems for plants leaves classification were accuracy and time. So my focus was to achieve accurate results in short time. For this purpose I have used hybrid approaches so that to combine the strengths of two or three good approaches to make them more strengthen. Proposed methodology consists of the following three steps: (i) First leaves images are captured. (ii) Then on these captured images, preprocessing is applied (iii) Features extraction is done by LTP first followed by LDP. It was observed that LDP gives the more accurate results than LTP. Then fusion of both Local Patterns is

performed to achieve the positive points of both LTP and LDP for good extraction of the features. Better results were achieved by the fusion of LTP and LDP but dimensionality problem increases. (iv) Features selection step was performed by the help of PSO. PSO is selected because of following advantages. PSO reduces the dimensionality problem. PSO is derivative free algorithm that is easy and simple. Because of Dimensionality problem speed of the system was also decreased. To cover up this problem Probabilistic Neural Network was chosen as classifier. But along with that another innovation of my paper is that Gradient Descent algorithm with Momentum was used to train the PNN just to take adaptive parameters by the user for more accuracy. Results obtained were compared and it's found that the suggested model of this paper gives more accurate results in lesser time.

### **Plant Disease Segmentation by Digital Image Processing**

This is my Review Paper. This paper presents different image processing techniques used for the early detection of various Plants diseases by different authors with different techniques. The main focus of our work is on the critical analysis of different plants disease segmentation techniques. The strengths and limitations of different techniques are also discussed in the comparative evaluation of current classification techniques. This study also presents several areas of future research in the domain of plants disease segmentation. The focus is to analyze the best classification techniques and then fuse certain best techniques to overcome the flaws of different techniques, in the future. Time and accuracy are the two important things to be considered. Accuracy can be improved by the use of different methods using image processing techniques, as compared to manual systems. Time is also saved by these new techniques. Among all these different techniques best techniques will be analyzed who have the maximum benefits. But in spite of the maximum benefits every technique has certain limitations. So to overcome the drawback of different techniques fusion of different techniques is the good idea. In the future I will fuse two or three techniques to get accurate results with fastest speed.