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0. Professional Statement and Core Competencies

- Skilled in Digital Signal Processing (DSP), Voice/Speech Feature Extraction and Machine Learning/Pattern Recognition Techniques.
- Skilled in pattern recognition methodologies, extensive experience in mixture models training and optimization algorithms. Proposed a novel optimization algorithm called EM-IT in PhD research.
- Extensive experience in Speech and Speaker Recognition. Good understanding of related speech feature extraction methodologies. Sufficient experience of working on speaker recognition in adverse conditions.
- Sufficient experience of working on speakers recorded in clinical environment and undergoing depression. Based on a speech corpora obtained from Oregon Research Institute, USA (ORI) as part of research collaboration at RMIT University.
- Competent in C, C++, and Matlab. Experienced in coding, debugging, testing, and performance optimization. Experienced throughout the software development lifecycle and developing on multiple platforms.
- Understanding of the need to optimize both the algorithm and the code, and have the expertise to do both well.
- Great communicator experienced in presenting highly technical subjects to stakeholders at all levels.
- Experienced leader, having led both technical projects, as well as community groups.

1. Essential Background

1.1 Education

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| a. 2007- 2010 | PhD – Pattern Recognition and Speech Processing
School of Electrical & Computer Eng.
RMIT University, VIC, AUS. |
| b. 2004- 2006 | Master of Eng.
Communication Systems & Networks
Institute of Information Technology
Degree by coursework with a research project
CGPA-3.73
Mehran University of Eng. & Tech,
Jamshoro, Pakistan. |

c. 2000-2004 **Bachelor of Engineering**
Computer Systems Engineering
Degree by coursework with a thesis project
CGPA-3.93
Meharn University of Eng. & Tech,
Jamshoro, Pakistan.

1.2 Employment History

a. 2004—TODATE Lecturer
Department of Computer Systems Engineering
Meharn UET, Jamshoro, Pakistan.
Course Lecturer/ Lab Design
Digital Image Processing
Data Structures
Computer Communication and Networking
Real Time Application of Microprocessors
Digital logic and Design
C/C++ programming

2. Conference/Workshops Attended

- Attended ICPR 2010 Conference Held in Aug 2010 at Istanbul, Turkey.
- Attended NSS'2009 conference held in October at Gold Coast, Australia.
- Attended and presented at FIAS'09 held at Gold Coast Australia.
- Attended and presented at IEEE IC-4 2009 conference held at Karachi Pakistan.
- Attended and presented European Signal Processing conference (EUSIPCO 2008) held at Lausanne Switzerland.
- Attended and presented at IMTIC 2008, held at Mehran UET Jamshoro Pakistan.
- Participation in "Data Analysis with MATLAB for Excel Users" Seminar, held on Monday 29th October 2007, Melbourne.
- Participation in the Matlab world tour '07 held on 24 May 2007 at Melbourne.
- Participation in Quiz Competition organized by FAST Islamabad, Pakistan in January 2003.
- Participation in software competition organized by MUET, Pakistan in January 2002.

3. Presentations

- Presented "Information Theoretic Expectation Maximization based Gaussian Mixture Modelling for Speaker Verification", at ICPR 2010, Turkey.
- Presented "Speaker Verification based on Different Vector Quantization Techniques with Gaussian Mixture Models", at FIAS 2009, Australia.
- Presented "Using Information Theoretic Vector Quantization for Inverted MFCC based Speaker Verification", at IC-4 Karachi Pakistan.

- Presented "Using information theoretic vector quantization for GMM based speaker verification", at EUSIPCO 2008, Switzerland.
- Presented "Speaker Verification Based on Information Theoretic Vector Quantization", at IMTIC'08, MUET Pakistan on 11th April 2008.
- Presented "Information Theoretic Speaker recognition" at 6th Annual Postgraduate Research conference at RMIT Australia on 25th Sep 2007.
- Presented the PhD research proposal as a requirement of research methodologies course as a "poster" held on 22nd June, 2007 at RMIT.
- Presented the master of Eng. Thesis titled as "Comparative Analysis of cryptographic algorithms" at the seminar, 2006.
- Presented the bachelor of Eng. Thesis titled as "Virtual private network a corporate solution for MUET", 2004.

4. Awards and Achievements

- Awarded PhD Scholarship under Faculty Development Program from Mehran UET Jamshoro of worth Rs.6 million approx.
- Awarded research scholarship of worth 22000AU\$ per annum by RMIT University, Australia.
- Awarded Travel Grant of Rs.123,000 by HEC to attend SST'2010 Conference at Melbourne Australia.
- Awarded Travel Grant of 5000AU\$ by RMIT University to attend ICPR2010 Conference at Istanbul, Turkey.
- Awarded Travel Grant of 2000AU\$ by RMIT University to attend NSS2010 Conference at Gold Coast, Australia.
- Awarded student Travel Grant of worth 2500CHF from EUSIPCO'08, Lausanne Switzerland, to attend EUSIPCO Conference.
- Awarded certificate of appreciation at the RMIT annual conference 2009.
- Selected as the finalist presenter at the RMIT annual conference 2008.
- Obtained Encouragement award at the postgraduate conference at RMIT University 2007.
- Obtained award of appreciation in Multimedia Project Competition sponsored by IT Intellectuals Forum MUET, 2003.

5. Reviewer of refereed conferences and journals

- Imaging Science Journal, ISSN 1368-2199.
- International conference on biometrics and biomedical engineering, China.