AHMED BILAL ASHRAF

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ACADEMICS

GRADUATE

Experience Summary

8+ years (4-Industry, 4+ Graduate Studies) of research and hands-on experience in computer vision and machine learning..

PhD (September 2006 –present)

Area: Computer Vision, Department of ECE, Carnegie Mellon University, Pittsburgh, PA, USA

Expected Graduation: June 2010

Research:

Broadly my reseach spans the areas of Machine Learning, Computer Vision and Image Processing. Specifically I am interested in the applications of machine learning to spatiotemporal image analysis, object tracking, object recognition, face analysis, face identification and facial expression recognition. More information can be found at http://www.andrew.cmu.edu/~aashraf

MS (September 2004 –2006)

Department of ECE, Carnegie Mellon University, Pittsburgh, PA, USA

EXPERIENCE (OCTOBER 2000 – TO AUGUST 2004)

Senior Software Engineer (December 2002–to August 2004)

Techlogix Inc.,

http://www.techlogix.com

(Developed a Vision based Occupant Classification System for Smart Airbag deployment for General Motors/Eaton Corporation)

Software Engineer (October 2000– November 2002)

Techlogix Inc.,

http://www.techlogix.com

PRIOR ACADEMICS

1996–2000

University of Engineering and Technology

Lahore, Pakistan

B.Sc., Electrical Engineering

Senior Project:

Design of PC-based Oscillometric Sphygmomanometer.

Real time Arterial Blood-pressure monitoring, as part of upgrading the cardiac care unit (CCU) at Punjab Institute of Cardiology, Lahore, Pakistan.

SELECTED PUBLICATIONS

Ahmed Bilal Ashraf, Simon Lucey, Tsuhan Chen, "Fast Image Alignment in the Fourier domain*", IEEE International Conference on Computer Vision and Pattern recognition (CVPR) 2010*

Ahmed Bilal Ashraf, Simon Lucey, Tsuhan Chen , "Reinterpreting the application of Gabor filters as a manipulation of the margin in the Support Vector Machines", *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 2010

Ahmed Bilal Ashraf, Simon Lucey, Tsuhan Chen, "Learning patch correspondences for Improved Viewpoint invariant Face recognition*", IEEE International Conference on Computer Vision and Pattern recognition (CVPR), 2008* ***(ORAL)***

Ahmed Bilal Ashraf, S. Lucey, J. F. Cohn, T. Chen, K. M. Prkachin, and P. E. Solomonl, "The Painful Face II– Pain Expression recognition Using Active Appearance Models", *Image and Vision Computing Journal ,2009*

Ahmed Bilal Ashraf, S. Lucey, J. F. Cohn, T. Chen, K. M. Prkachin, and P. E. Solomon, "The Painful Face –Pain Expression Recognition Using Active Appearance Models", *ACM International Conference on Multimodal Interfaces, 2007* ***(ORAL)***

Simon Lucey, **Ahmed Bilal Ashraf**, Jeff Cohn, "Investigating Spontaneous Facial Action Recognition through AAM representations the face", *Face recognition book, K.Kurihara, ed. Pro Literatur Verlag, Mamendorf, Germany,* 2007

M.Raffay A. Baloch, **Ahmed Bilal Ashraf**, Nauman Zaffar, "Object Segmentation Using Feature-based Conditional Morphology". *Proceedings of the 12th International Conference on Image Analysis and Processing - ICIAP 2003*. Mantova, Italy

AWARDS AND DISTINCTIONS

- Thesis proposal selected for showcase at ***CVPR 2010 Doctoral Consortium***
- NSF travel grant to participate in CVPR 2010
- Graduate Fellowship 2006 – present.
- Fulbright Fellowship for years 2004-06.
- Best Departmental Project Award for Electrical Engineering for the year 2000.
- National Talent Scholarship for the years 1996-2000 during undergraduate studies.
- Merit Scholarship for the years 1993-95 for High School studies.

TEACHING

- Fall 2008, Signals & Systems, Dept. of ECE, Carnegie Mellon University
- Spring 2009, Signals & Systems, Dept. of ECE, Carnegie Mellon University

SKILL SET SUMMARY

Programming Languages

C++, Matlab, Java, PL-SQL, x86 ASM

IDEs

Microsoft Visual C++ 6.0, Jbuilder 7.0, Oracle Forms 6i Builder, Oracle Reports 6i, Microsoft Visual Interdev

RDBMS:

MySQL, Oracle 8i, Access.

Web Servers

Oracle 9iAS, Tomcat

Tools and Technologies:

J2EE, JSP, Java Swing, Java AWT, JavaScript, HTML, DHTML.

MFC, COM.

Others:

Use Case Analysis,UML.

Image Processing Libraries: Intel OpenCV, IPL, MIL (Matrox), Microsoft Vision SDK,

Machine Learning/ Data Mining Tool: See5, Microsoft Visual Source Safe.

Firmware Programming: 8051 series Microcontroller based Applications

PROJECT MENTORING

April 2002– to September 2002

Design of a Motion Tracking Vision System

This was a Senior Project in Department of Electrical Engineering, University of Engineering & Technology, Lahore.

Tools and Technologies:

Visual C++, Microsoft Vision SDK, MFC, Parallel Port Interfacing.

INTERESTS

- Biological Vision
- Cognitive Psychology
- Game theory
- Anthropology