

CURRICULUM VITAE

Personal Information

NAME: SARMAD ABBAS
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Postal Address: House# 20, Street# 133, Sector G-13/4 Islamabad Pakistan.
Areas of Interest: Machine Learning, Medical Imaging, Computer Vision, Digital Signal Processing, Digital System Designs.

Career Objective

Seeking for a position within an academic and research based organization that will utilize my technical capabilities and provide me with opportunities to excel and benefit to others.

Education

Master Degree (18 Year Equivalent Education)

MS Computer Engineering from college of E&ME NUST Pakistan with **3.80/4.00** CGPA completed in 2015.

Research Thesis Title: Macula, Hemorrhages and Exudates Detection Along With Illumination Equalization of Color Fundus Images.

Majors/Courses:

Digital Image Processing,	Digital System Design,	Patter Recognition,
Computer Vision,	Advance DSP,	Machine Learning,
Advance Computer Architecture,	Selected Topics in Computer Networks.	

Bachelor Degree (16 Year Equivalent Education)

BE Computer Engineering from **BAHRIA University** Islamabad Pakistan with **78.13%** Marks and 3.23/4.00 CGPA Completed in Oct-2012.

Project Title: Electronic Toll Collection using, DIP to process vehicle and currency, and control logic using microcontrollers.

Majors/Courses:

Digital Image Processing	Cryptography and	VLSI Design
Computer Graphics	Network Security	Digital Design Using HDLs
Discrete time Signal Processing	Project Management	Micro-processors Base Design
Artificial Intelligence and Neural Networks	Advanced Computer Architecture	Control & Robotics

HSSC Degree (12 Year Equivalent Education)

ICS form BISE D.G. Khan Pakistan with **1st Division** in 2007 with the following Majors.

- Mathematics, Physics, Computer Science.

SSC Degree (10 Year Equivalent Education)

Matric from BISE D.G. Khan Pakistan with **1st Division** in 2004 with following Majors.

- Mathematics, Physics, Chemistry, Electrical Wiring.

Experience

- 1) **Research and Development Assistant:** Research and Development Assistant at Center for Advanced Studies in Engineering Pakistan on “Development of Net Enabled Retinal Image Analysis of Screening System” project, funded by National ICT R&D Fund Pakistan from September 01, 2013 to April 30, 2015.
- 2) **Teaching Assistant:** Working as TA at **College of E&ME NUST Pakistan** from Feb 2014 to Jan 2015. **Subjects** taught and the main **responsibilities** were:
 - I. **Digital Image Processing.** (With Dr Usman Akram).
 - II. **Digital System Design.** (With Dr. Shoab Ahmad Khan/ Mr. Sajid Gul Khaja)
 - a. To deliver lecture of lab and to made students to practice of their lab experiments.
 - b. To prepare up to date result and mark sheet of students grading.
 - c. Maintenance of the Lab Folder to have updated progress report of each student.
- 3) **Jr. Lecturer:** Working as Lab Engineer at **Bahria University Islamabad Pakistan** from 4 Feb 2013 to Jun 2013, as Visiting Faculty. **Subject** taught and the main **responsibilities** were:
 - I. **Digital Image Processing.**
 - a. To deliver lecture of lab and to made students to practice of their lab experiments.
 - b. To prepare up to date result and mark sheet of students grading.
 - c. Maintenance of the Lab Folder to have updated progress report of each student.
- 4) **Research and Teaching Assistant:** Working as Teaching Assistant with Dr. Usman Akram from Feb 2013 to June 2013 at **Bahria University Islamabad Pakistan**, the main responsibilities were:
 - a. To take class if the teacher is no available or busy in some work.
 - b. To work with Dr. Usman Akram within their research work.
 - c. Maintenance of the Folder to have updated progress report of each student.
- 5) Working on FPGA's/Microcontrollers Base Designs, Digital Image Processing Based Systems Designs, Computer Graphics, C++/Java/Python Programming and Mat-Lab in Academic Projects, the main responsibilities were:
 - a. Research work to have an efficient solution for the problem statement.
 - b. Time plaining for the work load to meet with deadlines.
 - c. Timely maintenance of reports for the projects and monthly reports for the final year project.
 - d. Timely maintenance of thesis of final year project.
- 6) Six Months **Teaching** in Education Inn Academy G11/2 Islamabad **Pakistan** (Contact# +923437879594)

Honors and Awards

1. Nomination of best research Thesis in MS.
2. 1st semester (2nd position in MS Computer Engineering), 2nd semester (1st position).
3. Overall 3rd position in MS.
4. Award of laptop by “Prime Minister Laptop distribution scheme to talented students” during MS.
5. Conducted (4 times a day and one time a week) workshop on Mat-Lab programming at College of EME NUST Pakistan.

Research Publications

Book Chapters

1. Akram, M. Usman, **Sarmad Abbas Khitran**, Anam Usman, and Ubaid ullah Yasin. "Detection of Hemorrhages in Colored Fundus Images Using Non Uniform Illumination Estimation." In Image Analysis and Recognition, pp. 329-336. Springer International Publishing, 2014.
2. Usman, Anam, **Sarmad Abbas Khitran**, M. Usman Akram, and Yasser Nadeem. "A Robust Algorithm for Optic Disc Segmentation from Colored Fundus Images." In Image Analysis and Recognition, pp. 303-310. Springer International Publishing, 2014.

International Conference Papers

3. **Sarmad Khitran**, M. Usman Akram, Anam Usman, and Ubaidullah Yasin. "Automated system for the detection of hypertensive retinopathy." In Image Processing Theory, Tools and Applications (IPTA), 2014 4th International Conference on, pp. 1-6. IEEE, 2014.
4. Wahab, Hassan, Syed Rizwan Haider, **Sarmad Khitran**, and M. Usman Akram. "Bright region and vessel density based robust optic disc segmentation." In Image Processing Theory, Tools and Applications (IPTA), 2014 4th International Conference on, pp. 1-6. IEEE, 2014.
5. M. Usman Akram, Daniyal Usmani, Tanveer Ahmad, **Sarmad Abbas**, Syeda Fouzia Noor. "Seamless Fundus Image Stitching using WLD Improve Field Of View", The 5th International Conference on Digital Information and Communication Technology and Its Applications, Lebanon May 2015.

Journal Papers

6. Daniyal Usmani, M. Usman Akram, **Sarmad Abbas**, Tanveer Ahmed and Imran Basit, "Generation of Retinal Image Mosaic using Weber Local Descriptor", Journal of Information Assurance and Security , pp. 111 – 119, Vol 10, No. 3, 2015.
7. Akram, M. Usman, et. al. "Glaucoma Detection using Novel Optic Disc Localization, Hybrid Feature Set and Classification Techniques", Submitted Pattern Recognition (Currently under review after revisions).
8. Alvi. Abubakar, et. al. "Automatic Detection and Classification of Malarial Retinopathy Associated Retinal Whitening in Digital Retinal Images", Submitted to IEEE Transactions on Biomedical Engineering.

Academic Projects

- Banking System Software in C++.
- Implementation of (Caesar, Auto Key, Vigenere and AES) Ciphers, in Mat-Lab.
- Hotel Management Software in JAVA.
- VGA, Serial RS 232, Keypad Controller Implementation on Spartan-3 FPGA.
- Implementation of Auto Key Cipher on FPGA.
- Simulation of AM Modulation and Demodulation in Mat-Lab.
- Hardware Designing of AM Receiver.
- Electronic Toll Collector (FYP, Digital Image Processing, Control Logic with Micro-controller).
- 3D Robot Modeling in OpenGL.
- 3D House Modeling in OpenGL.
- Home automation and Security System.
- Movie Company Data Base in Oracle and MS Access.
- Digital Alarm Clock Designing Using Micro-controller.

Expertise/Skills

Programming:	Mat-Lab, C/C++ (OOP, Data Structures), C#, Java, Computer Graphics (in OpenGL), Assembly Language, Embedded C, Verilog HDL, Data Structures, Python, HTML/CSS, PHP
Database:	Oracle 10g, MS Access, SQL.
Electronics/Designing:	Electronics, FPGA's, Microprocessors/Microcontrollers base System Designs.
Others:	MS Windows, MS DOS, MS Office, Adobe Photoshop, Adobe Premiere, AutoCAD.

References

1. DR. MUHAMMAD USMAN AKRAM

Assistant Professor.

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2. DR. SHOAB A. KHAN

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