

# MUHAMMAD MOAZZAM AZIZ

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## OBJECTIVE:

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Seeking a position in the field of robotics and computer vision, where my practical experience and theoretical knowledge is utilized in the most efficient manner that is fruitful for all human beings.

## PROFESSIONAL EXPERIENCE:

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### May 2001 to 2007 (Regular)

#### **Advance Engineering Research Organization (AERO), Pakistan**

Worked as research engineer in the field of, guidance and control units of the UAVs, particularly in the area of real time image processing, to aid in the guidance and control of the vehicle.

### June 2002 to 2007 (Part time)

#### **Institute of Engineering & Technology, Rawalpindi, Pakistan**

Member of visiting faculty for following courses

- a) *Digital Signal Processing*
- b) *Image Processing*
- c) *Microprocessor/Microcontroller based system design*

## EDUCATION:

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2007-till date      **Erasmus Mundus European Masters in vision and robotics  
(Passed first two semesters with 81% marks, studying 3<sup>rd</sup>  
semester)**  
HWU UK, UDG Spain, UB France and INSA de Rouen France

<b><u>First Semester Courses</u></b> <ul style="list-style-type: none"><li>• <i>Digital Signal Processing</i></li><li>• <i>Software Engineering</i></li><li>• <i>Data Mining and Machine Learning</i></li><li>• <i>Image Compression and Communication</i></li><li>• <i>Image Processing</i></li></ul>	<b><u>Second Semester Courses</u></b> <ul style="list-style-type: none"><li>• <i>Visual Perception</i></li><li>• <i>Fundamental on Robotics</i></li><li>• <i>Autonomous Robots</i></li><li>• <i>Scene Segmentation and Interpretation</i></li><li>• <i>Real Time Image Processing</i></li></ul>
<b><u>Third Semester</u></b> <ul style="list-style-type: none"><li>• <i>3D Digitization</i></li><li>• <i>Infrared Imaging and Physics</i></li><li>• <i>Pattern Recognition and Statistics</i></li><li>• <i>Image Analysis</i></li><li>• <i>Human Vision Psychophysics</i></li><li>• <i>Medical Imaging</i></li><li>• <i>Biological Basis of Medical Imaging</i></li></ul>	<b><u>Fourth Semester (Thesis)</u></b> <ul style="list-style-type: none"><li>• <i>Road and 3D Obstacle Detection Using Color Stereo Vision in Different Lighting Conditions</i></li></ul>

- 1996 –2001            **B.E (Industrial Electronics), A Grade**  
Institute of Industrial Electronics Engineering,  
N.E.D. University of Engineering and Technology, Pakistan
- 1994-1996            **Intermediate (F.Sc. Pre-Engineering), A Grade**  
Government College of Science, Pakistan

## RECENT PROJECTS:

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- Calibration of a camera.
- 3D model reconstruction using SFM.
- Design and implementation of algorithms for the fulfillment of specified tasks (obstacle avoidance, robot localization) using e-puck robot.
- Hand tracking and finger counting in real-time.
- Classification of objects from a number of visual object classes in realistic scenes (based on PASCAL Challenge 2006).
- Real Time Tracking of three targets in a series of frames.
- Digital watermarking of images.
- Applying machine learning algorithm to discover fashions in Second Life (<http://secondlife.com>).

## SHORT PROFESSIONAL COURSES

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- a) *Three months course on “Advance Computer Hardware Architecture” at Center of Advance Studies in Engineering (CASE), Pakistan*
- b) *Three days workshop on “Nano Electronics” arranged by COMSATS*
- c) *Two months course on “Chip Designing” arranged by Skill Development Council of Pakistan*

## COMPUTER SKILLS:

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### 1. Operating Systems.

*windows and Linux*

### 2. Languages:

*Verilog HDL, Turbo C, C + +, Visual C, visual Basic, Assembly 8088 / 80X86 / 8051*

### 3. Packages:

*MATLAB, MATHCAD, P-CAD, Protel, Orcad*

## DISTINCTIONS:

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- *Erasmus Mundus Scholarship for European MS in Vision and Robotics*
- *Six Merit Scholarships during B.E study from University.*
- *First Division (A-Grade) through out Educational Career.*
- *Over all third position in engineering university in B.E and got merit certificate*

## REFERENCES:

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- Prof. Fabrice Meriaudeau (Université de Bourgogne (uB), Le Creusot, France)  
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