

**NAVIN KUMAR AGARWAL**  
**BE ( ELECTRICAL AND ELECTRONICS)**  
**22, MALE, INDIA**

B-1,MEGHNA ESTATES  
ARUNODAYA COLONY  
MADHAPUR, HYDERABAD-81  
PHONE:+91-8297220005  
[navinagrwl@gmail.com](mailto:navinagrwl@gmail.com)

## Work Experience

VERIZON, Mindspace, Hyderabad

Software Engineer, (july-2013 to Present)

- Build the Backend system for the B-to-B E-Commerce platform of Verizon (IBM websphere commerce) .
- Contributed as an active member of design team of a Cloud E-Commerce System.

## Education

2013	Birla Institute of Technology, Mesra, Ranchi (AIEEE- 9779)	CGPA: 7.27	Percentage Equivalent: 72.7%
2009	DE NOBILI SCHOOL (CMRI)	93.75%	Class XII
2007	DE NOBILI SCHOOL (FRI)	86.4%	Class X

## Technical Skills

Languages C, C++, java

ROBOTICS MATLAB, OPENCV (computer vision)

## Paper Publications

Paper on "Constraint Optimized Path Tracking for Social Robots" has been presented in the International Conference on Computer Vision and Robotic (ICCV) 18<sup>th</sup> march, 2012 and published in the proceedings.

Paper on "Stereo-Vision based Obstacle detection using cloud services" has been published in the proceedings of the IEEE International Conference on Communication and Signal Processing-ICCSP 2013.

Paper on "Real Time Visual SLAM using Cloud Computing" has been selected and presented for the conference International Conference on Computing, Communication and Networking Technologies (ICCCNT 2013).

## Projects / Training

### CELLPHONE-BASED DEVICE CONTROL WITH VOICE ACKNOWLEDGEMENT AND AUTONOMOUS ROBOTICS

May 2011 - July 2011

Project trainee under the guidance of Dr.D.Basak, Principal Scientist and Dr.P.K.Mishra, Scientist, CIMFR, CSIR, INDIA

A new mechanism was introduced so that the ordinary services of the mobile phones can be leveraged to communicate with and control the home appliance and make our home and offices really smart ones, saving time and electrical energy. Autonomous robot was developed provided with intelligence using sensors. The hardware model was also developed.

### HEXAPOD

November 2010 - May 2011

Design and development of 6 legged biologically inspired robot (inspired from spider). This presently replicates the motion of a spider controlled by my joystick.

### IMAGE CONTROLLED AUTOMATIC MACHINE (ICAM)

**Control and power system designer****September 2011 - February 2012**

Designed and developed an Image Controlled Automatic Machine (ICAM) for the purpose of Metal Sheet Cutting. This machine takes shapes to be cut on the metal sheet in, as input a high quality image and cuts the sheet accordingly. Results have shown that the performance of this machine meets well the industry requirements at a much lower Product Cost.

**DESIGN OF AUTOMATIC STEERING CONTROL AND ADAPTIVE CRUISE CONTROL OF SMART CAR****July 2011 - September 2011**

This car designed to participate in Freescale's SMART CAR RACE 2011 whose motive is to build a driverless smart car to run in urban and rural areas.

**Technologies Used:** A linear CMOS camera, with car type drive mechanism. PID logic was implemented for proper steering control and speed control. Current feedback was used for speed feedback. Freescale semiconductor's microcontroller MPC5604B was used.

**AUTONOMOUS SURVEILLANCE ROBOT****February 2012 - May 2013**

Design and development of a robot which can survey an area without any human aid as in case of underground mines and desert or unknown locations

**Technologies Used:** Design and development of a surveillance robot with autonomous image controlled algorithms and rocker bogie structure to make it all terrain. Opencv and atmel microcontrollers are used.

**Achievements****Academics**

- Topped in 12th board(ISC) in school. Rank 3 in district in 12th boards (ISC).
- All India rank 62 in 8th national science Olympiad, and all India rank of 341 in 9th national science Olympiad

**Other**

- Successfully Conducted TEQIP sponsored workshop on microcontroller based application for Master and PhD students.
- Successfully Organized and conducted workshop on embedded robotics and Image processing using Matlab and OpenCV
- Successfully Organized and participated in an Industrial trip to Tata Steel Ltd

**Sports**

- Gold medal in long jump.

**Extra - Curricular Activities****SUB-TEAM LEADER OF ROBOCON TEAM BIT MESRA.**

- The manual team leader for the International Robotics Event

**EXECUTIVE MEMBER OF ROBOLUTION**

- The robotics club of BIT, MESRA.

**EXECUTIVE MEMBER OF EEESOC**

- The technical club of BIT, MESRA from EEE dept.

**STUDENT REPRESENTATIVE IN SCHOOL**

- Served as the deputy head prefect in school
-