

# ROHAN PRADIP SHAH

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## OBJECTIVE

Opportunities in computer vision.

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## EDUCATION

- Candidate for Masters in Computer Science at University of Pennsylvania.  
GPA: 3.57/4.00 May 2013
- Bachelor of Engineering in Electronics and Communication at M S Ramaiah Institute of Technology  
(Visvesvaraya Technological University, Karnataka, India). CGPA: 8.88/10.00 2007-2011

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## PAPER

*"An Implementation of a Hand Gesture Recognizing Algorithm"*, by Rohan Pradip Shah, Pavithra Kannan, Thulasi Srinivasan, Uzma Parveen, at KnowledgeUtsav, Bangalore, India, in Aug 2010. (Awarded Best Paper)

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## CURRENT PROJECTS

- **Research Assistantship- Human Pose Estimation for Gait Analysis:** My current work with Dr. Ben Taskar involves using computer vision and machine learning techniques for human pose estimation, in order to perform gait analysis using a Microsoft Kinect.

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## COMPLETED PROJECTS

- **Self- Localizing Smart Cameras:** assisted Dr. C J Taylor in the GRASP lab at the University of Pennsylvania on research involving computer vision for 3D sensor tracking, after calibration and localization of a setup of multiple smart cameras.
- **Robo-Cup Upennalizers:** Autonomous robots which play "soccer" in the annual RoboCup. It involves planning, localization, locomotion, and vision. I worked on localization and vision.
- **Under-grad Thesis: Computer Vision for Dynamic Hand Gesture Recognition** Aug 2010-June 2011  
Design of a real-time dynamic hand gesture recognition algorithm using Haar-like features and orientation histograms. Implemented using openCV and integrated with applications like slide-show and virtual drawing. Ported to an embedded ARM-based Beagleboard (running Linux). Ranked 2nd best project of the year by the EC department, and was among 20 short-listed projects in national-level "Jed-I Project Challenge" at the IISc, Bangalore, India, June 2011.
- **Static Gesture Recognition Using Orientation Histograms** May-Aug 2010  
Implemented, using openCV and MATLAB, a paper "*Orientation Histograms for Hand Gesture Recognition*", by WT Freeman and Michal Roth (MIT), 1994.
- **Intelligent Ground Vehicle Competition (IGVC)** Aug 2009-May 2010  
Participated in the 18<sup>th</sup> Annual IGVC, held at Oakland University, Rochester, Michigan, from June 4-7, 2010. Built an unmanned GV capable of following a prescribed track, avoiding obstacles, as well as in waypoint navigation using a GPS receiver.

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## TOOLS

Eclipse, gcc/MingW, MATLAB, OpenCV, OpenNI

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## COMPUTER LANGUAGES & TECHNOLOGIES

C/C++, HTML/Javascript Python, Verilog/VHDL.

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## RELEVANT COURSES

- Computer Vision and Computational Photography, Machine Vision, Artificial Intelligence, Languages. Data Structures, Embedded Systems, Optimization Theory, Digital Image Processing, Theory of Computation

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## EXTRA-CURRICULAR ACTIVITIES

- **Theatre:** Prizes at International English theatre competition at the "NLS Theatre Festival" (December, 2010), and National English Theatre Competition, organized by Jain University (Feb, 2010).
- **Debates and Public Speaking:** Won several inter-college debates in under-grad (Sparsh 2006, Unmesha 2006, Udbhav 2009), and Master of Ceremonies for annual cultural fest in under-grad.
- **Volunteer** for the highly successful Pulse Polio Program, organized by the Rotary Club in India.

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## AFFILIATIONS

- GRASP (General Robotics, Automation, Sensing, and Perception) Lab @UPenn
- Association of Computing Machinery (ACM)