**Konduri Vamshi Krishna**

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Indian Citizen

**Educational Details**

Master of Science - Robotic Systems Development (December 2014)

**Robotics Institute, Carnegie Mellon University**, Pittsburgh, PA

GPA: 3.63/4.0

Bachelor of Technology in Mechanical Engineering (2009-2013)

**Indian Institute of Technology**, Guwahati, India

GPA: 8.08/10

**Internships/Work Experience**

* **Internee at International Institute of Information Technology: Hyderabad,India Summer, 2013**

Worked on the mapping and exploration with camera onboard a “Parrot” drone.

Worked on Feature detection, Optical Flow, Plane detection using Ransac Method, Image segmentation.

* **Internee at Automation, Robotics and System control Lab: Modena, Italy Summer, 2012**

Localization of the robot by fusion of data from Inertia Measurement unit and GPS using kalman filters.

System was to be used in automated agricultural vehicles in Italy, RTK – GPS was ground truth.

* **Industrial Training at BAUD Industries : Les Verriers, Switzerland Summer, 2011**

Familiarized with various departments of this Swiss micro component manufacturing industry, such as the production, quality control, and logistics departments. This company specializes in production of micro- components for watches, medical and aviation industries with a precision as low as 5 microns.

* **Industrial Training at MTAR Industries: Hyderabad, India Summer, 2011**

Worked with various manufacturing processes and quality control methods at both micro and macro sizes of production. The company specialized in conventional and Non – conventional processes for manufacturing, with products ranging from satellite components for ISRO to nuclear plant products.

**Projects**

* **Development of a combined UAV/UGV system May 2013 - Present**Unmanned aerial and ground vehicle collaboration system to identify and transport a particular object from the environment.
* **Technology Development Plan for “Motion Controller device” May 2013 - Present**Analyze competition and market opportunity, determining the development path and required resources, developing cost and pricing models and developing a market and sales plan for a motion controller device aimed at the video game market.
* **A\* algorithm and LPA\* incremental search May 2013 – Dec 2013**The advantages of the LPA\* algorithm, to include the dynamic environment scenario, over the A\* algorithm was analyzed.
* **Localization of a Robot using Vision and Sensory Input May 2012-May 2013**

Guide: Dr. S. K. Dwivedy, Professor, Department of Mechanical Engineering, IIT Guwahati

Implementation of Fuzzy logic in an autonomous robot, on Arduino platform with input from a distance measuring sensor and the output was the speed of the wheels controlled with Pulse Width Modulation.

* **Fuzzy logic using Mamdani methods in wall following robots Dec–2012**

Implementation of Fuzzy logic in an autonomous robot, on Arduino platform with input from a distance measuring sensor and the output was the speed of the wheels controlled with Pulse Width Modulation.

* **Optimization in a Non Linear Problem Jan 2013 - May 2013**

Using Genetic Algorithms and deterministic methods to find out the optimum solution for a non- linear problem statement with nonlinear and bounded constraint using Matlab.

* **Simulation of punching mechanism on ADAMS Platform June 2011 – Dec 2011**

Simulation and analysis project of the mechanism in the ADAMS software. Visualization and the forward kinematics were made easier in this software.

**Coursework**

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| Manipulation mobility and control | Computer Vision |
| Fundamental Mathematics for Robotics | Robot Autonomy |
| Mechatronics | Systems Engineering |
| Managerial and Engineering Economics | Game theory and Economics |
| International Economics | Business seminar I & II |

**Online Courses (Coursera)**

* **Control Of Mobile Robotics** - Distinction grade - Georgia Institute of Technology
* **Social Psychology**  - Completed with Statement - Weslayen University

**Software Skills**

C++, Python, Matlab, ROS, Solidworks, Adams, Arduino, OpenCV

**Other Information**

* Good English Proficiency. TOEFL score of 117 on 120 (Test for English as a Foreign Language)
* Participated in 5k “pretty good race” at CMU and Trekking expeditions organized by the Mountaineering club of IIT- Guwahati.
* Basic proficiency in French.