

VEERA VENKATA RAM MURALI KRISHNA RAO MUVVA

Cell : (662) 518 – 0475, E-mail : mvvrnkr@gmail.com, vm545@msstate.edu

Web Site: <http://krishnamuvva.com>

EDUCATIONAL QUALIFICATIONS

- M.S., Computer Science, Mississippi State University, GPA – 4.0, Pursuing.
- B.Tech., Computer Science & Engineering, Rajiv Gandhi University of Knowledge Technologies, 81.5% (GPA – 3.7), 2015.
- PUC., M.Bi.P.C., Rajiv Gandhi University of Knowledge Technologies, 90.8%, 2011.
- SSC, Andhra Pradesh Residential School, 94%, 2009.

PUBLICATIONS

1. Muvva V.V.R.M.K.R., Yang Zhao, Pratik Parajuli, Song Zhang, Tom Tabler, “Automatic Identification of Broiler Mortality using Image Processing Technology” *10th International Livestock Environmental Symposium*, ASABE, Omaha, NE, September 2018. (Accepted).
2. Muvva V.V.R.M.K.R., Naresh Adhikari, Amritha Ghimire, “Towards Training an Agent in Augmented Reality World with Reinforcement Learning” *International Conference on Control, Automation, and Systems*, IEEE – Robotics and Automation Society, Jeju, Korea, October 2017.
3. Muvva V.V.R.M.K.R. “A Collaborative Filtering Recommender System with Randomized Learning Rate and Regularized Parameter” presented at *International Conference on Current Trends in Advanced Computing*, IEEE, Bangalore, India, March 2016.
4. Duvvuri D.N. , Muvva V.V.R.M.K.R. “A Novel Method To Achieve Optimization in Facial Expression Recognition Using HMM” presented at *International Conference on Signal Processing And Communication Engineering*, IEEE, Guntur, India, January 2015.

WORK EXPERIENCE

Research Assistant, (Jan 2017 – Present) @ Mississippi State University,

Responsibilities :

- **Removing broiler mortality using a robot hand** : - This project is about to implement a robot which can remove the dead birds in broiler house and put those in dumpster. I am working for machine vision of the robot, which is about using the visual and IR images to identify the dead bird using image processing. The ultimate aim of this project is to install the robot arm in broiler house. This project is supervised by Dr. Zhang and Dr. Zhao.
- **Unmanned Ground Robot for broiler house** :- This project is about to implement an Unmanned autonomous robot to alter chickens. This project is in very early stage, more details will be updated in soon. This project is supervised by Dr. Zhao.
- **Augmented Reality approach for medical applications**– This project is about to use augmented reality technology for medical data processing. We are using Hololens for this project. This project is supervised by Dr. Swan.
- **Unmanned Aerial Vehicle for Intra-Department Mail Delivery (Personal Project)** – This project is about implement an autonomous mini vehicle to deliver the intra-department mails without human being interference. This project is divided into three phases 1) Building an DIY (Do It Yourself) RC-Based mini quadcopter (RTF(Ready to Fly) or ARF(Almost Ready to Fly) quadcopters restrict sometimes to make it autonomous so we preferred to use DIY). 2) Making mini quadcopter to fly and land autonomously using Range finder sensors and computer board (such as Raspberry pi). 3) Installing camera sensors to make the vehicle to read the address on the letters (to deliver it to corresponding faculty) and installing a light weighted 3D-printed arm (to pick up and handover the mails). This project is led by me. A few passionate students are working with me. We have successfully finished the first phase, now we are working for the second phase.

Developer (FEB 2016 – JUL 2016) @ TreeSignature, India

Responsibilities:

- Worked as both front end and back end developer for a part of e-commerce website

Scientific Trainee (Dec 2015- Jan 2016) @ Inter University Center for Astronomy and Astrophysics (IUCAA)

Responsibilities:

- ASTROSAT (India's first dedicated multi-wavelength space observatory, which was launched by ISRO) . I worked with the FITS (Flexible Image Transport System) files taken by CZTI (Cadmium Zinc Telluride Imager), where the sources are Cygnus X-1, Crab Nebula etc.

GRADUATE AND UNDERGRADUATE PROJECTS

- *Image Classification using CNN*, Fall - 2018 Machine Learning Project
 - *Abstract:* We have built a convolution neural networks model to classify images into five variety of classes (Dog, Cat, Horse, Cow and Bird). The train and test images are taken from the Image-net website. We have implemented this using Keras package.
 - *Technologies :* Python, Keras.
- *Robot with Glasses (A Physical Robot which can interact with augmented reality world)*, Spring - 2017 AI Robotics Project
 - *Abstract:* A robot was implemented using augmented reality glasses along with camera sensor to avoid virtual obstacles. After that, made the robot to reach the virtual goal in a augmented reality environment (where threats, safe points, obstacles are there) using Depth First Search. Later performed the same action using Q learning, which is one of the active reinforcement learning. (Videos can be found on my website).
 - *Technologies :* Arduino, Unity, and some other hardware elements
- *Titanic Dataset Analysis (Analyzation, Visualization and building a model for the dataset)*, Spring - 2017 Visual Data Analysis with R Project
 - *Abstract:* I was interested to find which type of passengers had survived a lot during the incident of Titanic. Selected features using visual analysis of the data, after that built a Support Vector Machine classifier to classify the passengers based on survival. This classifier yield best result when tested on the test data set.
 - *Technologies :* R
- *Strategy based RISK Agent (Agent to play RISK game)*, Fall - 2016 Artificial Intellgence Project
 - *Abstract:* Implemented a strategy based agent to play RISK game, it got the second position in three player tournament with other agents.
 - *Technologies :* Python
- *Environment Rendering (Virtual Reality Project)*, Fall - 2016 Computer Graphics Project

- *Project Description* : Rendered our department building and surroundings in the virtual environment through Unity3D.
- *Technologies* : Unity3d, C#
- *Reinforcement Agent for Escaping Problem (Reinforcement Learning Project), Fall - 2016 Algorithms Project*
 - *Project Description* : Implemented an agent which uses reinforcement learning(Q-learning) to escape from a dangerous environment.
 - *Technologies* : Python
- *Movie Recommender System(Machine Learning Project) (Final Year Project)*
 - *Project Description* : It is a recommender system which is going to recommend a movie to user by using the method of collaborative filtering.
 - *Technologies* : C language, MATLAB

- *Predator (Android Game) (Internship)*
 - *Project Description* : An android game in which player has to avoid the prey from the predator. I was one of the developer among many, I had worked for few transitions for the game.
 - *Technologies* : Android, Animation
- *Blood Bank Management System (Web Based Project)*
 - *Project Description* : A website which maintain and update the entire blood banks details of a particular location.
 - *Technologies*: HTML, JavaScript, PHP, MySQL

TECHNICAL SKILLS (remove this)

Programming Languages	Python, C, C++, C#, Java
Databases	MySQL
Web Designing and Server Scripting	HTML, JavaScript, PHP
Software Packages	MATLAB, OpenCV, ROS, Keras, Unity, Vuforia, Latex , Multisim, EMU8086
Operating Systems	Windows, Linux (Ubuntu, Linux Mint, Kubuntu, Fedora)

AWARDS, ACHIEVEMENTS, MEMBERSHIPS, ACADEMIC SERVICES, AND EXTRA ACADEMIC ACTIVITIES

Awards

- Research Assistantship, Mississippi State University, Jan 2017 – Present
- Student Research Travel Award, Mississippi State University, for IELSX - 2018

Achievements

- Got 4th rank in the ranking system of SYSS, whose aim is to identify the rural background merit students.
- Selected for RGUKT 6 year integrated B.Tech course among all the SSC pass students in our state.

Memberships

- Student member of IEEE
- Student member of IEEE – Computer Society
- Student member of IEEE – Robotics & Automation Society
- Student member of IEEE Young Professionals

Academic Services

Reviewer:

- 25th IEEE Conference on Virtual Reality and 3D User Interfaces, 2018

Extra Academic Activities

- I am also working as a programmer for Xipiter team, whose aim is to implement an unmanned aerial vehicle to participate in a competition. I work for Path Planning and SDA (Search, Detect, and Avoid)
- I am also curious to write stories. Currently, I am working for a fantasy work called 'Haesthiya'