Naveen Mysore

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Profile

Interdisciplinary Software and Electronics Engineer experienced in Data Management, Application Software development, Computer Vision and HCI. My research interests are primarily in the domains of Human computer interaction and Computer Vision.

Experience

Software Engineer, EMC Corporation (DELL EMC) – 06/2015 to till date
I am working with core could management team (SM team) on Data Management projects for EMC`s Data Units (DDR) installed in different data centers. I work on bug fixes and building API`s and tools for DDR/DDMC software platforms. My current project includes building API`s for licensing and scale out of clusters in cloud.

Graduate Research Assistant, UNC Charlotte – 02/2014 to 05/2015
Under Dr. Audrey Rorrer I worked on data analysis project which was funded by National Science Foundation. I built python based software tools to automate the data analysis for CISE REU program which were conducted across many US universities.

Research Intern, Nokia Research Center – 04/2013 to 07/2013
This was my undergrad part time research internship role at Nokia Research. Here I Developed hardware software module for light field communication systems. Our research consisted of encoding information in light as pulses and decoding them on cell phone camera.

Education

University of North Carolina at Charlotte – Master of science in computer science - 2015
PES University, Bangalore – Bachelor of Engineering in Electrical and Electronics - 2013

Skills

C, C++, Python, Java, Web applications, Android/IOS, Machine learning techniques, Computer vision, Open source hardwares (Arduino, raspberry pi, leap motion), robotics, electronics circuits designing.

Publications

- Naveen Mysore, "*An elastic group recommendation system designed for multivariate dynamic attributes*", 2016 IEEE/ACIS 15th International Conference on Computer and Information Science (ICIS).
- A Warnulkar, Dishan A, Naveen M N, "*Processor enabled power management system by mechanically choosing the best batteries in a grid network*", proceedings of IEEE 3rd international conference on computational intelligence.
- Naveen M N,"*Gesture and Character tracing interactive lecture board*", International Journal of advanced computing, volume 35 special issue 2.
- Naveen M N, "*A Complete Interface device*", proceedings of IEEE 3rd international conference on computer research and development.

Projects

-Audio depth mapping using stereo depth for a ROI in an image (Currently working): Back when I was interning at Nokia research, in one of the projects our team was exploring the applications of micro lenses. By arranging tiny lenses in specific patterns we can extract interesting information from images. One such application is extracting depth from a single image. In this project I am exploring how we can reverse engineer to simulate audio depth using micro audio sources based on stereo depth for a region of interest in an image.

-Autonomous Drone (Currently working) : Just for fun I am mounting few sensors on a drone (AR Parrot Drone) to make it autonomous for indoor mapping. RPLidar along with other sensors like gyro and accelerometer can be used for good indoor mapping. However making logical decisions on yaw, pitch and roll to make drone autonomous is quite challenging. I am still in the process of designing a control system with a quick feedback.
-Grep (On IOS) : Grep is a meet up recommendation app. For a group of friends who wish to hangout, finding the convenient place to meet up is always a problem. Grep tries to solve this problem by using Elastic recommendation system. The system learns users preferences and makes recommendation by using a cross breed collaborative and content filtering technique. Currently this app has over 80~90 users.
-Discentes : Discentes is an interactive lecture board. The system has an ability to sense human gestures and solve vector mathematics problems graphically. It also has optical character recognition system which provides a neat natural interface to the user to read and plot equations in a 3D space. The main aim of this project was to provide a natural interface to play with equations. The project is now continued again to bring the application in Virtual Reality.
-Visual Reviews : This is project where my friends and I developed by hacking around. We used leap motion to capture hand gestures and navigate on google 3D maps. For a given query people can intuitively gets reviews and ratings for different places on map using gestures.
-Nokia Pair Up (Funded by Nokia): This project was done at Nokia Research Center. Pair up is a wristband which connects to your cell phone and traces your hand gestures. These gestures like hand shake were used to connect people on LinkedIn.
-Intel Ankur Project (Funded by Intel) : Designed and developed a sensor based embedded system for “Social Entrepreneurship Program: Intel Ankur Project" Generic Sensor Board to measure quality of fluids like milk, oil, honey etc.
-Swasikshak: Developed a micro controller based embedded system which can trace the hand movement and understand the written characters. Swasikshak is a low cost intuitive electronic slate board intended to alleviate the education problems associated in developing countries.
-Grid Network Assembly : Grid network assembly is a power management system designed for optimizing the battery performances connected in grid of series or parallel or mixed connections. The system has an onboard processor which monitors battery health and takes decision on how the connections must be made for best performance.
-Black Watch : Just for fun I built a smart watch using raspberry pi and sensors like gyroscope and accelerometer. The watch had capability to stream videos and play music. The software was intended for open source development where people can program their own watch based on their required applications. For instance I programmed my watch to start recording videos whenever there was a high rate of change of gps location i.e when I go biking.

-For more projects and technical details : www.mysorenaveen.xyz/#projects