Best Project List   **2015-16**

| BATCH No	ID NO	NAME	Guide Name	Title
1	VM7062	MUKILAN S	Mr.J.Nagaraj	Mointoring Electrical Parameters system for house hold Appliances.
	VM7070	SUNDARAM SUBRAMANIAN D		
	VM7111	VIGNESH A		
2	VM7139	ABBYMATHY R	Mr.P.Robert	Border Detection and Classification of skin lessions using Melanocytic and non - melanocytic lesions.
	VM7097	RAMYA T V		
	VM7119	SUGANTHRA N		
3	VM7060	AISHWARYA RAMYA SP	Mrs.P.M.Anu	An efficient Speech Recogonization using voice commands
	VM7126	SAN MATHI PRIYA R S		
4	VM7141	MANEESHA R	Ms.K.C.Nishitha	Novel Method for Weed Classification in Mazie Field Using OTSU and PCA Implementation
	VM7145	VARSHINI S		
5	VM7061	GOMATHY.S	Mrs.P.Manjula	Surveil of vaccines using wireless sensor Network.
	VM7057	SRI VIDHYAA.S		

1. **Mointoring Electrical Parameters system for house hold Appliances.**

   Objective :

   To measure the voltage, current and power consumed by each appliance. To efficiently make use of the power consumption for each appliance.

   The system principally monitors electrical parameters of household appliances such as voltage and current and subsequently calculates the power consumed. The developed system is a low-cost and flexible in operation and thus can save electricity expense of the consumers. To monitor each and every home appliance individually for knowing their power consumption using the mobiles. Through GSM, the message is sent to the user mobile for informing that there is any short circuit and even how much load is consumed by the appliance such as light, fan. So the user can control the appliance through his/her mobile.

Block diagram
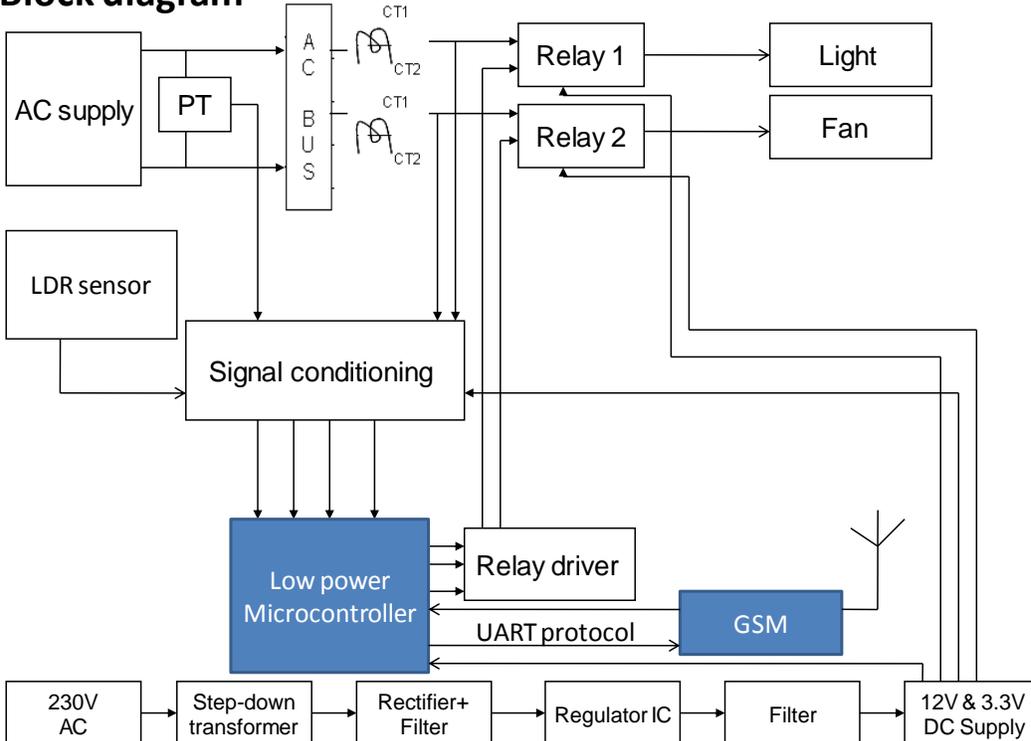
Conclusion :

   The Voltage, current and power consumed by each appliance is measured.The user can automatically monitor and control the appliance.The user can also allot the certain power consumption for the appliance.

2. **Border Detection and Classification of skin lessions using Melanocytic and non - melanocytic lesions.**
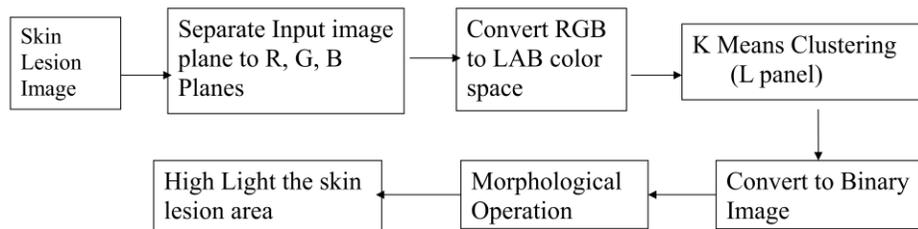
Abstract :

▶ To develop a new computer-aided method for the skin lesion classification applicable to both melanocytic skin lesions (MSLs) and nonmelanocytic skin lesions (NoMSLs). That is, most of the conventional works handled only melanocytic skin lesions (MSLs) such as melanomas and nevi, which originate from melanocytes, whereas nonmelanocytic skin lesions, (NoMSLs) indicating all the other pigmented skin lesions except MSLs such as BCCs and seborrheic keratoses (SKs) have been relatively neglected. This is because melanoma is the most fatal skin cancer and especially difficult to differentiate from nevus even by expert dermatologists.

Border detection in dermoscopy images using statistical region merging

▶ Fast and unsupervised approach to border detection in dermoscopy images of pigmented skin lesions based on the statistical region merging algorithm. The method is tested on a set of 90 dermoscopy images. The border detection error is quantified by a metric in which three sets of dermatologist-determined borders are used as the ground-truth.

▶ **Lesion Border Detection in Dermoscopy Image Using Ensembles of Thresholding**.

Method Dermoscopy is one of the major imaging modalities used in the diagnosis of melanoma and other pigmented.In many cases, the lesion can be roughly separated from the background skin using a thresholding method .

Architrecture :

```
┌──────────┐   ┌──────────────────┐   ┌──────────────┐   ┌────────────────────┐
│ Skin     │   │ Separate Input   │   │ Convert RGB  │   │ K Means Clustering │
│ Lesion   │ → │ image plane to   │ → │ to LAB color │ → │ (L panel)          │
│ Image    │   │ R, G, B Planes   │   │ space        │   │                    │
└──────────┘   └──────────────────┘   └──────────────┘   └────────────────────┘
                                                                    │
                                                                    ▼
┌──────────────────┐   ┌──────────────┐   ┌────────────────────┐
│ High Light the   │ ← │ Morphological│ ← │ Convert to Binary  │
│ skin lesion area │   │ Operation    │   │ Image              │
└──────────────────┘   └──────────────┘   └────────────────────┘
```

3. **An efficient Speech Recogonization using voice commands**

Abstract :

The main aim of the project is to effectively use the speech recognizer, which makes the computer recognize commands given by the user. The CELP (Code Excited Linear Prediction) technique is used for speech coding in speech recognizer.

We have identified the capability of the above said application and working to build its efficiency further to execute high level voice commands given by the user. This finds great advantage in the now fast moving world where the user has to give only voice commands to finish his job. Consequently this application is expected to reduce the time delay in executing commands with GUI.

Proposed Snap Shots
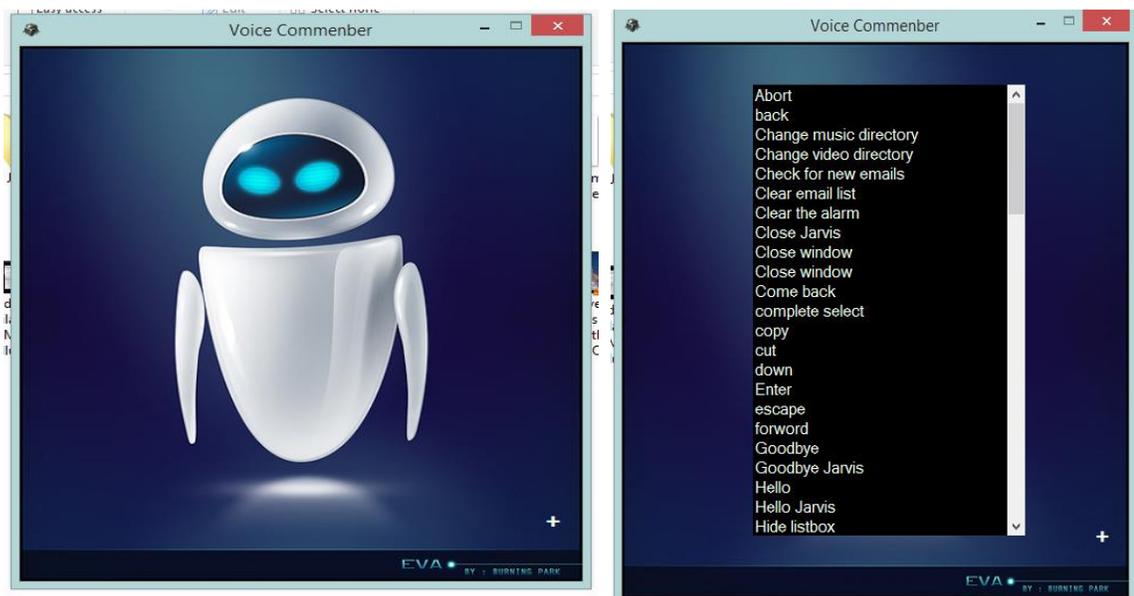
Conclusion

This proposed system will be very useful for the physically disabled person to access the system/computer easily.Hands-free computing is any computer configuration where a user can interface without the use of their hands, an otherwise common requirement of human interface devices such as the mouse and keyboard. Speech recognition systems can be trained to recognize specific commands and upon confirmation of correctness instructions can be given to systems without the use of hands. This may be useful while driving.

4. Novel Method for Weed Classification in Mazie Field Using OTSU and PCA Implementation
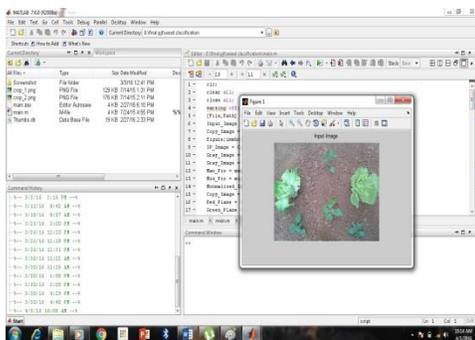
Objective:

- The main aim of the project is to develop a novel method for weed classification in maize field. Crop row detection in images in agricultural fields. Further classification between weed and crop. Otsu and PCA implementation. The crop area is taken by the image and apply otsu' thresholding method converted to binary image. Then the binary image is taken for the applied threshold level for weed area, based on the weed area weed plants are separated from the crop area. If the threshold value exceeds, apply PCA implementation to the image to retrieve the relevant image from the database

MODULES :

Preprocessing: In this process RGB is taken and perform normalization on that each plane of the color image. Indices computation also caluculated, Excess green, Excess blue, Excess red will be calculated.

Otsu Thresholding: In this thresholding is applied to the the indices images. Based on this background and foreground is extracted. Mean intensity mask is also calculated.
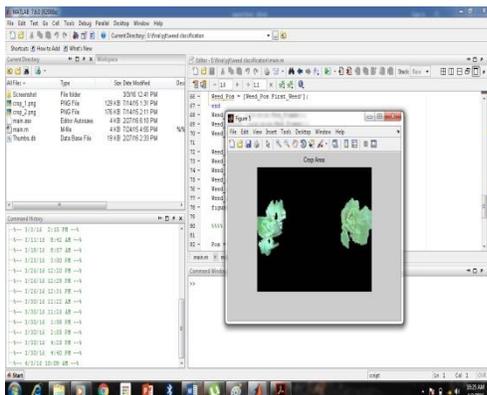
Segmentation: In this threshold is fixed based on the value weed and crop area is segmented. If the threshold value is exceeds the predefined threshold perform PCA implementation.

Input Image
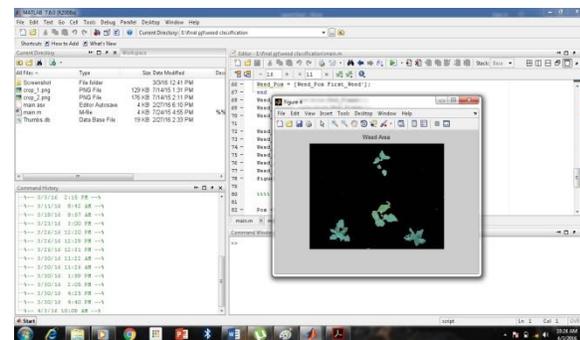
weed Area

Crop Area

5. **Surveil of vaccines using wireless sensor Network.**

   Objective :

   This project aims at monitoring the temperature for vaccines storage using Intel Galileo Gen 2 kit. Using a temperature sensor connected to the Galileo,temperature in the refrigerator can be monitored, when the temperature of the coolant goes beyond or below the threshold temperature, using GSM technology, message is sent automatically to the customer

   Data Logger Features and Specifications for Temperature Monitoring of Refrigerated Vaccines

   Detachable temperature probe

   To be kept in liquid-filled bottle

   Cable length > 1 m preferred

   Continuous temp monitoring

   At least one reading/15 min

   Memory storage : 4000 readings

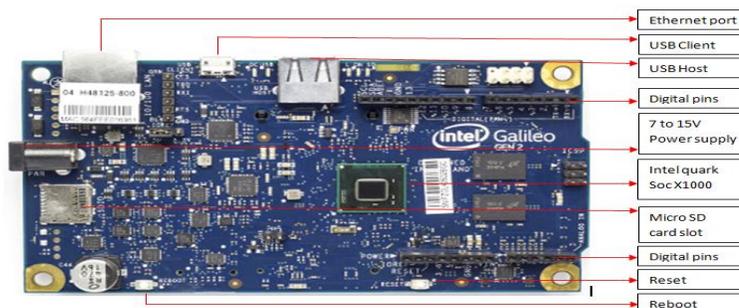   ~ 39 days recording at one rdg/15 mins

   Device stops recording when memory is full, reset after data download

   Operating range: –20 °C to 40 °C

   (for refrigerated vaccine monitoring)

   Proposed system uses sensor to sense the temperature of the coolant if the temperature is not correct then vaccines can be shifted to safe place.

   The device detects the temperature and intimates the concern person through alert message to the registered mobile number

Galileo gen 2 board