

HOME SECURITY AUTOMATION

Group 2 -

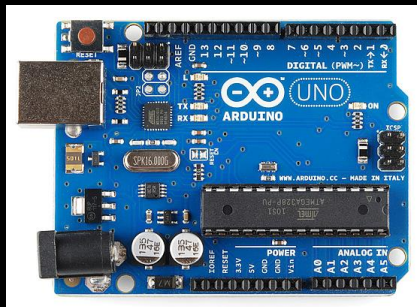
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Demo Date: 3/25/2019

<https://github.com/nikunjhaveri123/HomeSecurityAutomationApp>

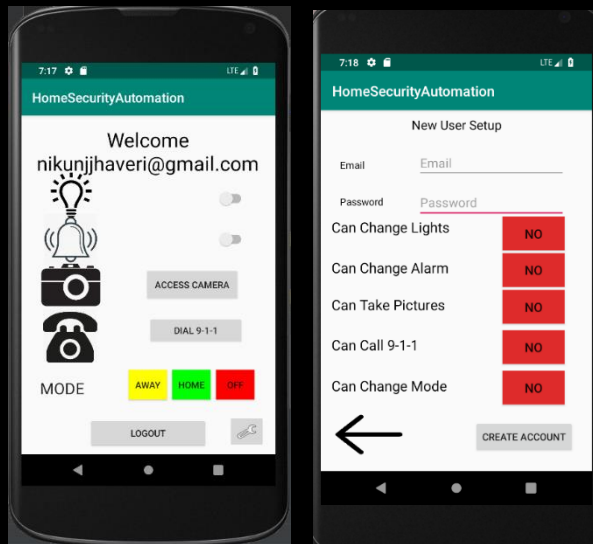
SYSTEM HARDWARE

- Arduino Board
- Lights
- Alarm
- Camera
- Motion Sensor
- Accelerometer



MOBILE APP

- Allows for user to directly control home security system features
- Allows user to manually take picture
- Gives user ability to call emergency services if potential threat is identified
- Can be accessed by multiple users who have different privileges
- New user accounts can be created and user privileges can be modified



INTEGRATED FACIAL RECOGNITION TOOL

- Allows for automatic disarming of home security features if recognized users approach front door
- Verifies user with pictures stored in external database that users themselves can upload
- Algorithm is able to determine confidence in which it can identify the user

```
DEMO -- python -m python recognize.py --detector face_detection_model --em...
> --embedding-model openface_nn4.small2.v1.t7 \
> --recognizer output/recognizer.pickle \
> --le output/le.pickle \
> --image images/ash.png
[INFO] loading face detector...
[INFO] loading face recognizer...

Identified ashwin with 87.428181% confidence

(cv) Kaushals-MacBook-Pro:DEMO kaushal$ python recognize.py --detector face_dete
ction_model --embedding-model openface_nn4.small2.v1.t7 --recognizer output/reco
gnizer.pickle --le output/le.pickle --image images/harmit.png
[INFO] loading face detector...
[INFO] loading face recognizer...

Identified harmit with 85.129988% confidence

(cv) Kaushals-MacBook-Pro:DEMO kaushal$ python recognize.py --detector face_dete
ction_model --embedding-model openface_nn4.small2.v1.t7 --recognizer output/reco
gnizer.pickle --le output/le.pickle --image images/miraj.png
[INFO] loading face detector...
[INFO] loading face recognizer...

Identified miraj with 88.280714% confidence
```

