

**EE/SE/CPRE 491 Weekly Report**  
**MAY 1631 - Spring 2016**  
**Week 10 Report**

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**Advisor**

Leland Harker

**Client**

ISU Electrical & Computer Engineering

**Project Title**

Automated Tool Monitoring System

**Group Member**

<b>Team Leader</b>	Edward Droesch (CprE)
<b>Team Webmaster</b>	Wan Zulsarhan Wan Shaari (SE)
<b>Team Communication Leader</b>	Ibtisam Osthram (EE)
<b>Team Key Concept Holder</b>	Mohamad Asyraf Samsudin (EE)
<b>Team Key Concept Holder</b>	Deeksha Juneja (CprE)

## **Meeting Attendance (March 20<sup>th</sup>, 2016)**

Wan, and Ibtisam

## **Weekly Summary**

The main goal of this week is to try out new techniques for tool detection instead of using shape sticker.

## **Meeting Minutes**

- We discover geometric matching and OCR/OCV function in Vision software
- The geometric matching function works best in checking the presence of a template in the entire image or in a region of interest based on geometric
- While the OCR/OCV function is a function to read characters in a region of the image
- We try both functions and test with our system if it can work better than the shape matching using shape sticker

## **Weekly Accomplishment**

- Try out new techniques to improve the current design for more efficiency and friendly set-up system
- Communication protocol between Raspberry Pi and MyRio issue solved

## **Plan for Coming Week**

- Finalize the design for tools detection improvement
- Get everything settled (all software and hardware parts) and ready for second instructor meeting on March 30th
- Prepare presentation slides and video for final prototype demonstration

## **Pending Issues**

- Foam has not been ordered yet
- Second camera for capturing images has not arrived yet
- Interfacing with existing lock mechanism

## Individual Contributions

- **Edward**
  - Still on spring break
- **Wan**
  - Met Ibtisam to discuss and test further on which functionality works best with the system
  - Solved the communication protocol issue between Raspberry Pi and MyRio
- **Ibtisam**
  - Met Wan to discuss and test further on which functionality works best with the system
  - Tested the geometric matching function and compared the results from both geometric matching function and pattern matching function
- **Mohamad**
  - Still on spring break
- **Deeksha**
  - Explored the potential of Vision Assistant
  - Communicated with Ib to discuss progress in the project

## Individual Hourly Contributions

Team Member	Weekly Hour	Cumulative Hour
Edward Droesch	0	48
Wan Zulsarhan Wan Shaari	6	94
Ibtisam Osthram	6	83
Mohamad Asyraf Samsudin	0	68
Deeksha Juneja	3	47