**Sprint 1 Plan**

**Greens Only**

**Sprint Completion Date:** April 20, 2018

**Revision Number:** 1

**Date:** April 9, 2018 - April 20, 2018

**Goal:** Testing different methods of object detection software to determine which method will provide the best option for detecting contaminants.

**Task Listing**

As a developer, I would like to determine the effectiveness of color detection software in terms of differentiating between produce and contaminants.

1. Search online for different color detection software. (13 hours)
2. Run the color detecting software on many different images. (4-5 hours)
3. Create a script that extract a set of images from a video (4 hours)
4. Create a script that processes an image and interprets it as a matrix of RGB values for each pixel (2 hours)
5. Explore potential for masking unnecessary pixels in an image (6 hours)
6. Come up with a function that evaluates the greenness of a pixel (3 hours)

As a developer, I would like to determine the effectiveness of edge detection software in terms of differentiating between produce and contaminants.

1. Search online for different edge detection software. (13 hours)
2. Test OpenCV’s Canny Edge Detection Library (4 Hours)
3. Test Matlab Edge Function (4 Hours)
4. Attempt edge detection through Canny Method in Matlab (3 Hours)
5. Attempt edge detection through Sobel Method in Matlab (3 Hours)
6. Attempt edge detection through Fuzzy Logic Method in Matlab (3 Hours)

As a developer, I would like to determine the effectiveness of comparing images against each other in order to help find contaminants in the produce.

1. Search online for methods to compare images (13 hours)
2. Be able to compare two images with each other pixel by pixel to determine a percent similarity (4-5 hours)
3. Modify code to identify the location of the differences between two images. (5 hours)
4. Modify code to alter the images so there will be less unneeded information for better comparisons. (5 hours)

**Team Roles**

Kevin Ajili: Developer, Product Owner

Arindam Sarma: Developer, Scrum Master

Cesar Neri: Developer

David Munoz: Developer

Eric Su: Developer

An Tran: Developer

**Initial Task Assignment**

**Kevin Ajili:**

As a developer, I would like to determine the effectiveness of comparing images against each other in order to help find contaminants in the produce.

1. Search online for methods to compare images (13 hours)
2. Be able to compare two images with each other pixel by pixel to determine a percent similarity (4-5 hours)
3. Modify code to identify the location of the differences between two images. (5 hours)
4. Modify code to alter the images so there will be less unneeded information for better comparisons. (5 hours)

**Arindam Sarma:**

As a developer, I would like to determine the effectiveness of edge detection software in terms of differentiating between produce and contaminants.

1. Search online for different edge detection software. (13 hours)
2. Test OpenCV’s Canny Edge Detection Library (4 Hours)
3. Attempt edge detection through Canny Method in Matlab (3 Hours)

**Cesar Neri:**

As a developer, I would like to determine the effectiveness of color detection software in terms of differentiating between produce and contaminants.

1. Search online for different color detection software.
2. Run the color detecting software on many different images.
3. Create a script that processes an image and interprets it as a matrix of RGB values for each pixel
4. Explore potential for masking unnecessary pixels in an image

**David Munoz:**

As a developer, I would like to determine the effectiveness of edge detection software in terms of differentiating between produce and contaminants.

1. Search online for different edge detection software. (13 hours)
2. Test Matlab Edge Function (4 Hours)
3. Attempt edge detection through Sobel Method in Matlab (3 Hours)
4. Attempt edge detection through Fuzzy Logic Method in Matlab (3 Hours)

**Eric Su:**

As a developer, I would like to determine the effectiveness of color detection software in terms of differentiating between produce and contaminants.

1. Search online for different color detection software.
2. Run the color detecting software on many different images.
3. Create a script that extract a set of images from a video
4. Come up with a function that evaluates the greenness of a pixel

**An Tran:**

As a developer, I would like to determine the effectiveness of comparing images against each other in order to help find contaminants in the produce.

1. Search online for methods to compare images (13 hours)
2. Be able to compare two images with each other pixel by pixel to determine a percent similarity (4-5 hours)
3. Modify code to identify the location of the differences between two images. (5 hours)
4. Modify code to alter the images so there will be less unneeded information for better comparisons. (5 hours)

**Scrum Times**

Tuesday, Thursday, Saturday: 2:00 pm (Online)

Friday: 11:00 am (Online meeting with Atollogy)