Team Copy Waste

Scrum 3

Oct. 8, 2021 - Oct. 22, 2021

IN PARTNERSHIP WITH
PRAIRIE ROBOTICS

THE TEAM

Nolan Flegel

Machine Learning

Rishabh Prasad

Front-End Services

William Peers

Back-End Services

PROJECT VISION

*REDUCE **RISK** FOR*
WASTE MANAGEMENT
***WORKERS** & **COST** FOR*
MUNICIPALITIES

OBJECTIVE

*CREATE AN **OBJECT DETECTION MODEL FOR RARE** AND **SEVERE CONTAMINATION** IN HOUSEHOLD RECYCLING*

STATUS
GREEN

Project Issues / Changes

No Issues or changes at this time!

Individual Contributions & Next Up

Overview

GREEN SCREEN

CITY PERFORMANCE

- Contamination Rate: 23%
- Common Contaminant: Plastic Bag

312 OFFENDERS

222 CONTAMINANTS

RECENT COLLECTION

- Collection Date: Tuesday OCT 14 / 2021
- Collection Zone: South East
- Hazardous Waste: 5
- Households Collected: 500
- Total Contaminants: 123

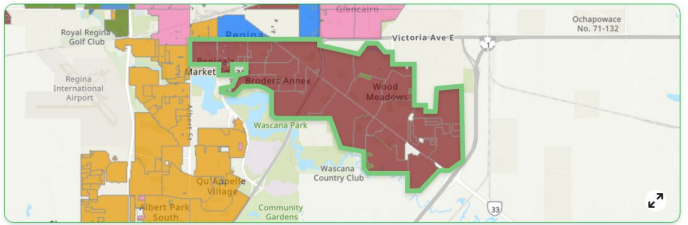
GREEN SCREEN

EAST ZONE PERFORMANCE

Collection Date: Tuesday OCT 14 / 2021

123 BINS COLLECTED

222 CONTAMINANTS DETECTED



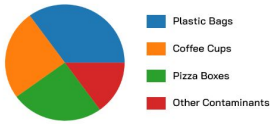
43 OFFENDERS

9% CONTAMINATION RATE

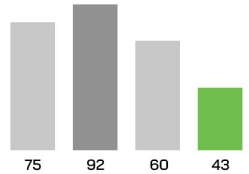
5 REPEAT OFFENDERS

60% BIN SET OUT RATE

CONTAMINANTS

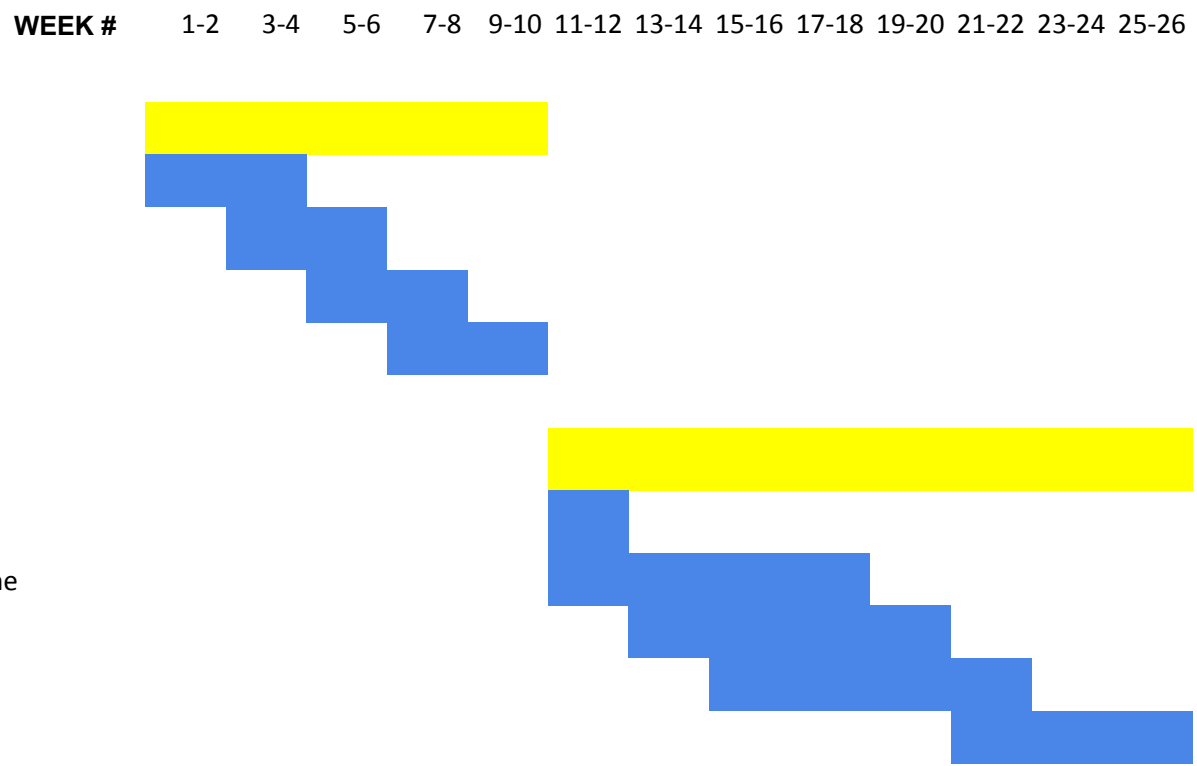


OFFENSE COMPARISON

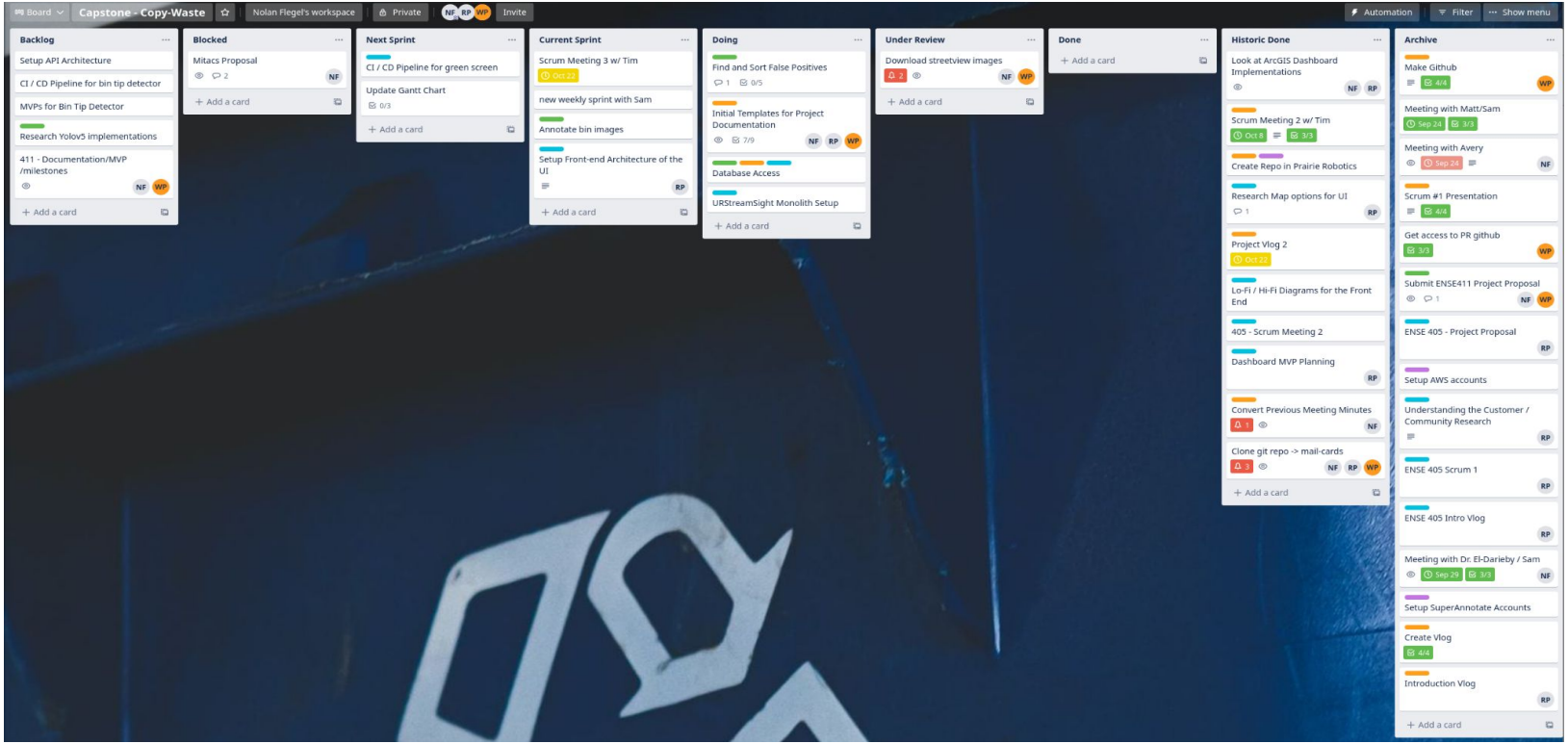


Overview

Overview


WEEK #
1-2
3-4
5-6
7-8
9-10
11-12
13-14
15-16
17-18
19-20
21-22
23-24
25-26
Phase 1: Bin-tip
Research real-time detection algorithms
Collect false-positive images
Annotate images
Train detection models
Phase 2: Copy-Paste Augmentation
Collect various images of HHW items
Develop Copy/Paste Augmentation pipeline
Create test dataset
Train model
Evaluate results

Overview

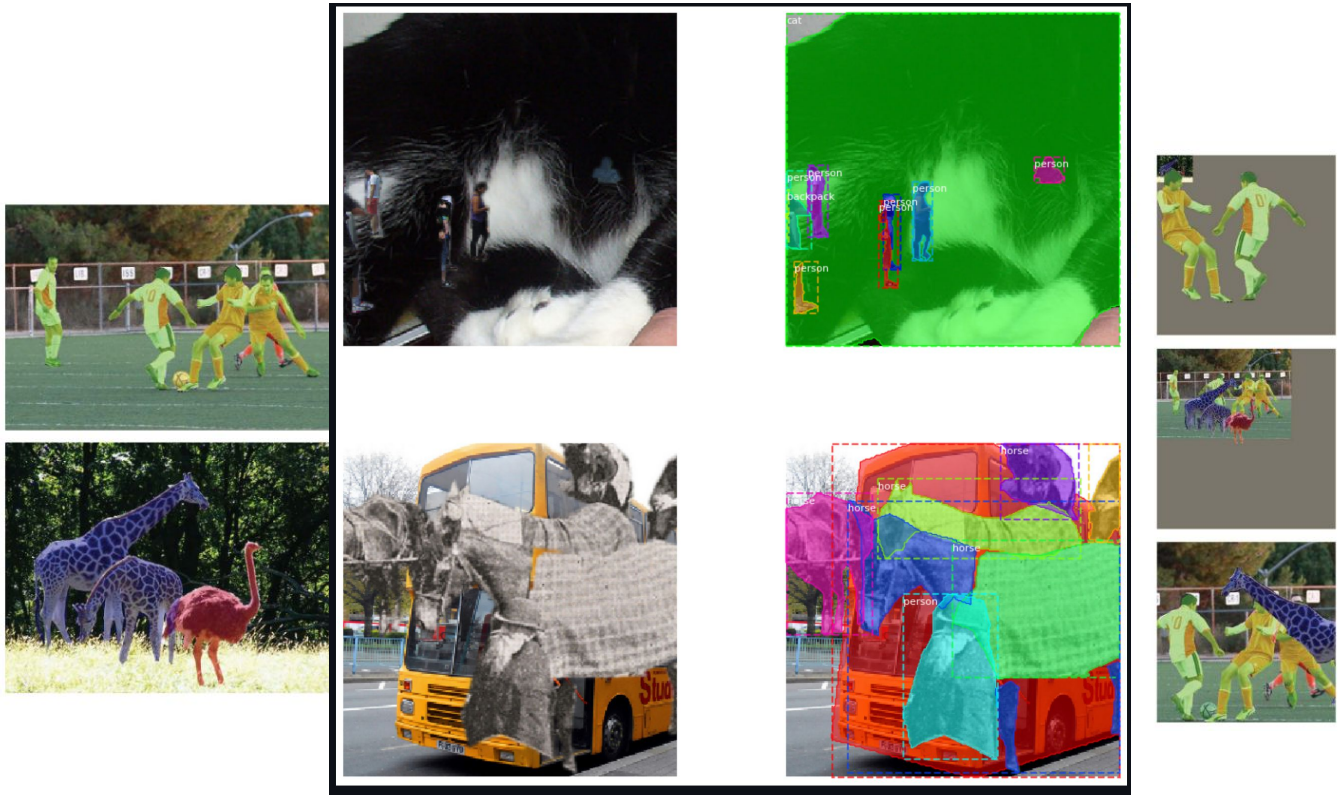

Board
Capstone - Copy-Waste
Nolan Flegel's workspace
Private
Invite
Automation
Filter
Show menu
Backlog
Setup API Architecture
CI / CD Pipeline for bin tip detector
MVPs for Bin Tip Detector
Research Yolov5 implementations
411 - Documentation/MVP /milestones
Add a card
Blocked
Mitacs Proposal
Add a card
Next Sprint
CI / CD Pipeline for green screen
Update Gantt Chart
Add a card
Current Sprint
Scrum Meeting 3 w/ Tim
new weekly sprint with Sam
Annotate bin images
Setup Front-end Architecture of the UI
Add a card
Doing
Find and Sort False Positives
Initial Templates for Project Documentation
Database Access
URStreamSight Monolith Setup
Add a card
Under Review
Download streetview images
Add a card
Done
Add a card
Historic Done
Look at ArcGIS Dashboard Implementations
Scrum Meeting 2 w/ Tim
Create Repo in Prairie Robotics
Research Map options for UI
Project Vlog 2
Lo-Fi / Hi-Fi Diagrams for the Front End
405 - Scrum Meeting 2
Dashboard MVP Planning
Convert Previous Meeting Minutes
Clone git repo -> mail-cards
Add a card
Archive
Make Github
Meeting with Matt/Sam
Meeting with Avery
Scrum #1 Presentation
Get access to PR github
Submit ENSE411 Project Proposal
ENSE 405 - Project Proposal
Setup AWS accounts
Understanding the Customer / Community Research
ENSE 405 Scrum 1
ENSE 405 Intro Vlog
Meeting with Dr. El-Darieby / Sam
Setup SuperAnnotate Accounts
Create Vlog
Introduction Vlog
Add a card

Addressing Comments

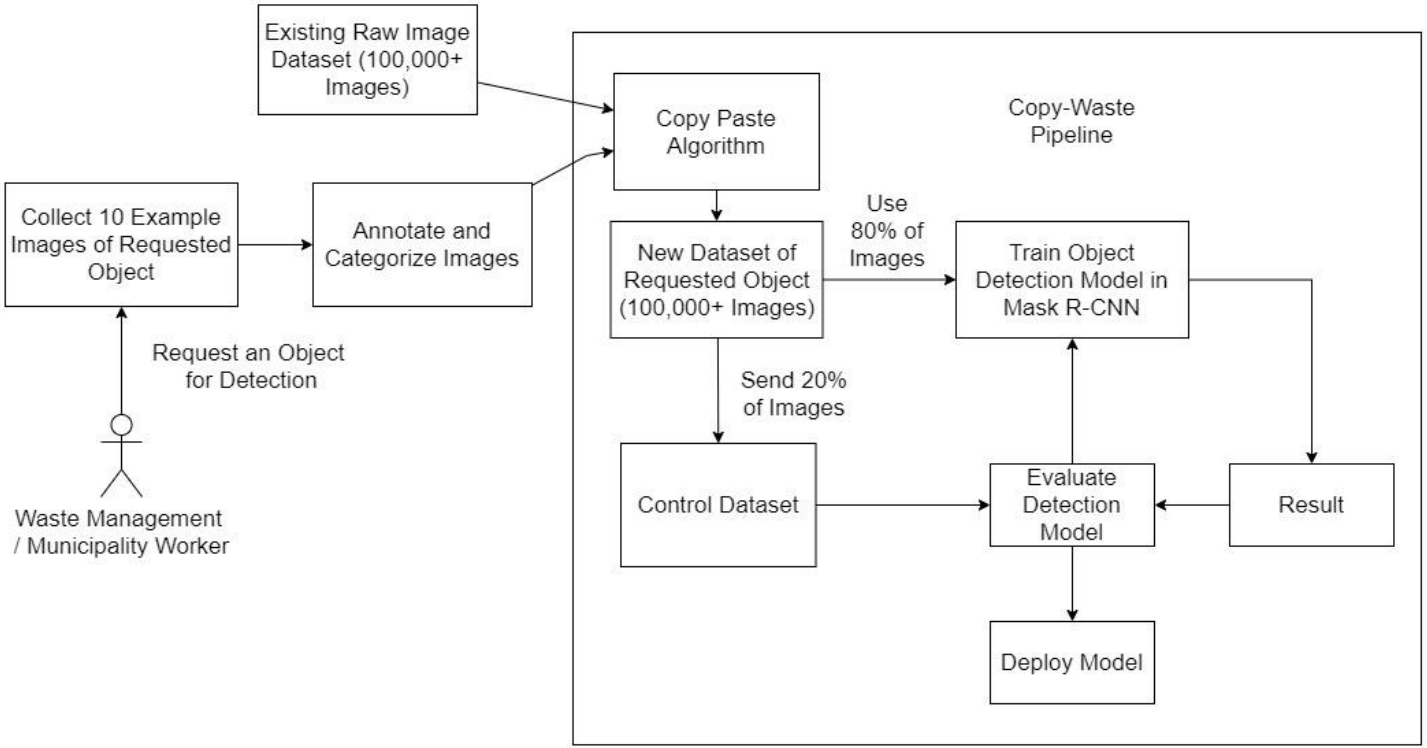
Tim:

“Are you creating the "copy-paste" algorithm or is it already created (by Prairie Robotics)? Will you be comparing this algorithm with others? Does this matter?”

Simple Copy-Paste



Simple Copy-Paste



Reflection

→ Does the team feel "on track"?
We believe we are still on track.

→ What progress does the team particularly feel good (great) about?
- Lots of Conversations
- Our Research
- Better Understanding of Business Needs

Reflection

→ What barriers (if any) does the team feel are a current impediment to success?
Still awaiting feedback upon our Mitacs proposal.

→ What help (if any) does the team require to move positively forward?
Review project initialization documents with Stakeholders

Reflection

→ What questions or concerns does the team have (if any)?
Processing Power of edge device

References

- https://www.cbc.ca/news/canada/saskatchewan/emterra-recycle-depot-fire-1.6202918