

Team Copy Waste

Scrum 7

Mar. 8, 2022 - Mar. 15, 2022

Mitacs



THE TEAM



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Machine Learning



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Front-End Services



William Peers
Back-End Services

PROJECT VISION

REDUCE RISK FOR
WASTE MANAGEMENT
WORKERS & COST FOR
MUNICIPALITIES



PROJECT MISSION

TO *AUTOMATE* THE
DETECTION OF
SEVERE & RARE
CONTAMINANTS IN
RECYCLING



Business Needs

- Reduce Risk of Fires and Associated Health Concerns
- Reduce Cost
- Address Careless Recycling & Hazardous Contamination

Business Needs



Saskatchewan

Firefighters knock down recycle depot fire in Regina's west end



<https://www.cbc.ca/news/canada/saskatchewan/crews-fighting-fire-at-crown-shred-and-recycling-1.5980051>

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

STATUS
GREEN

Project Issues / Changes

- No Issues / Changes



Individual Contributions



- Importing/Exporting to AWS
- Auditing False Positive images of grocery bags
- Refactoring

Individual Contributions



- Audit False Positive Images of Clamshell packaging
- Implement Importing / Exporting images using organization standard
- Scaling up dataset production and experimentation
- Error handling

Individual Contributions

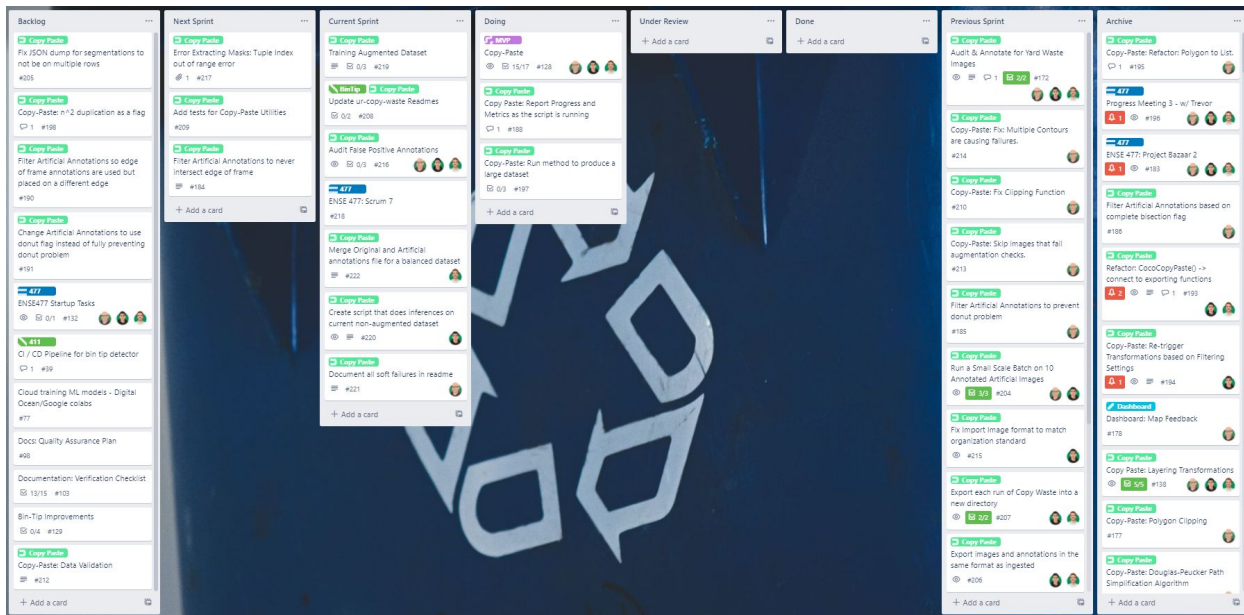


- Generated small scale datasets
- Testing and debugging
- Error handling
- Large Dataset Production
- Training Mask R CNN model using augmented data
- Audited false positive images for clear plastic packaging

Simple Copy-Paste



Knowledge Management Overview



Next Up

- Code Reviews
- Model training and testing
- Project Conclusion documentation



Reflection

- Does the team feel "on track"?
 - We believe we are still on track
- What progress does the team particularly feel good (great) about?
 - We feel great about producing large datasets
 - Ability to gracefully handle run-time errors

Reflection

- What barriers (if any) does the team feel are a current impediment to success?
Potential for unexpected problems with model training.
- What help (if any) does the team require to move positively forward?
 - Guidance and resources from our Industry Partner regarding model training.
 - Also do we need to book a demo space?

Reflection

- What questions or concerns does the team have (if any)?

Potential risks related to experimental / cutting edge software development.

Thanks for Watching!