Last updated: 2021-04-08
Summary of changes:

- Removed hardware requirements as they are handled by Prairie Robotics exclusively
- Removed “create a filter to remove low quality images”
- Replaced “integrate with an existing API…” with “create an API to communicate between our front end display and back end results”
- Removed “create a system to sum the quantity of recyclables…”
- Modified project budget from ~$1000 to $10 000 dollars

URStreamSight: PROJECT CHARTER

Project Name	URStreamSight
Date Produced	2020-10-04
Project Goals	This project intends to produce a software product that will monitor the quality of municipal recycling and give meaningful feedback to the individual households. Providing feedback will hopefully reduce contamination in recycling streams and increase the quality of recycling.
Project Objectives	Develop a tool that operates within waste collection vehicles that could classify recyclables and non-recyclables on a bin by bin basis. Created an API for the front end display for fetching recycling contamination results. Create a machine learning model to train on the bin image dataset and classify items in images as recyclables or not. Create a front-end UI to take the scores and provide visual representation of quality of recycling.
Project Budget	~$10 000 with items including: - AWS computing time costs - AWS machine learning development, training, testing etc. - AWS storage fees - SuperAnnotate annotations applied to training data for contaminant classifier
Project Sponsor	Prairie Robotics
Project Manager	Sam Dietrich

Additional Key Project Stakeholders

Software Engineering Faculty:

Dr. Macaig: Project Supervisor

Mentors:

Dr. El-Darieby: Project Supervisor

Overall Project Milestones

Described in URStreamSight: Milestone Based Schedule

Overall Project Risks

Limited dataset to train and test classifier

Poor model quality for classifier

Quality of images captured by camera.