Litter Patrol

A network of really smart robots
built to clean up your community

Partnered with RamuDroid

Team

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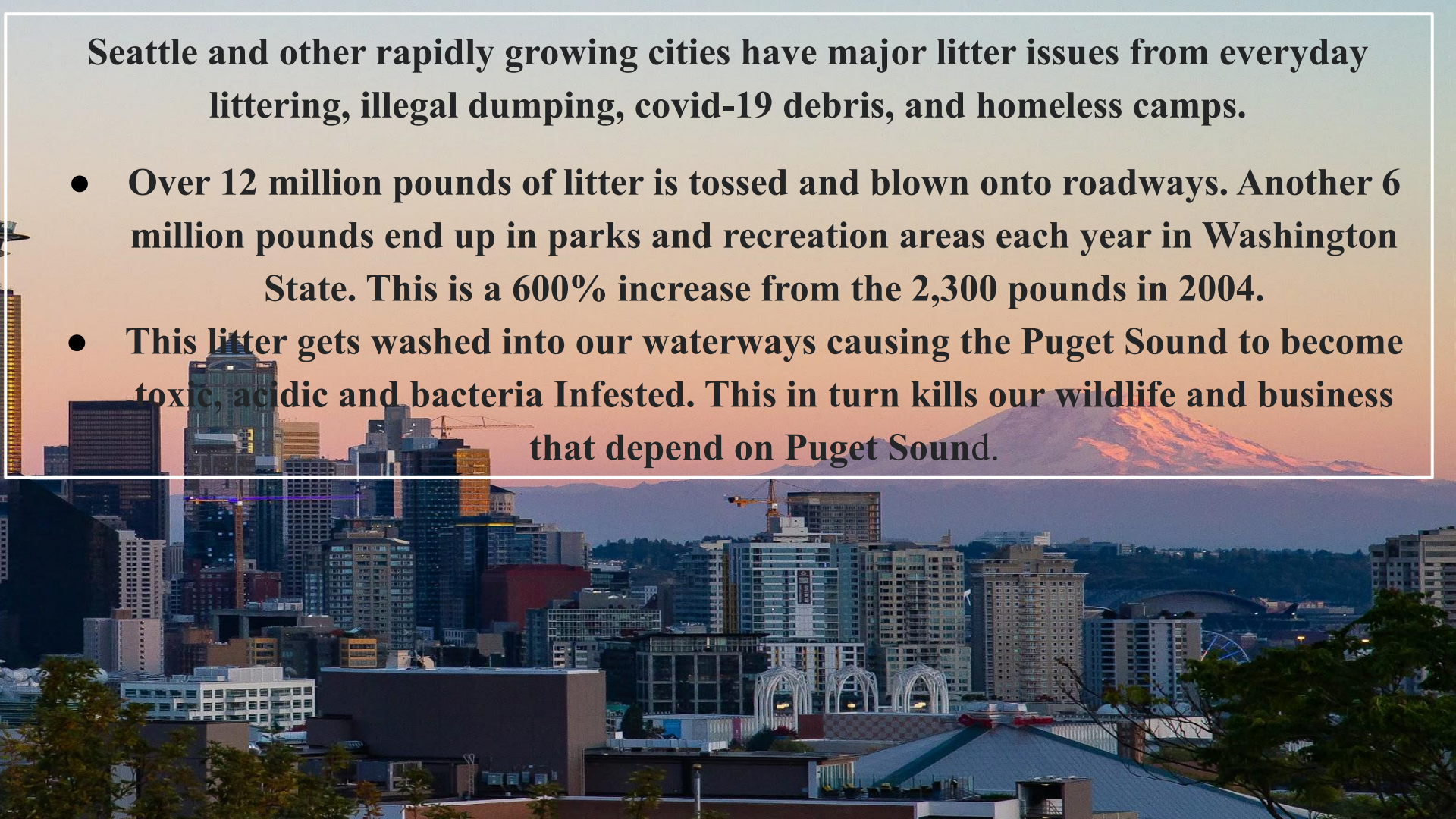
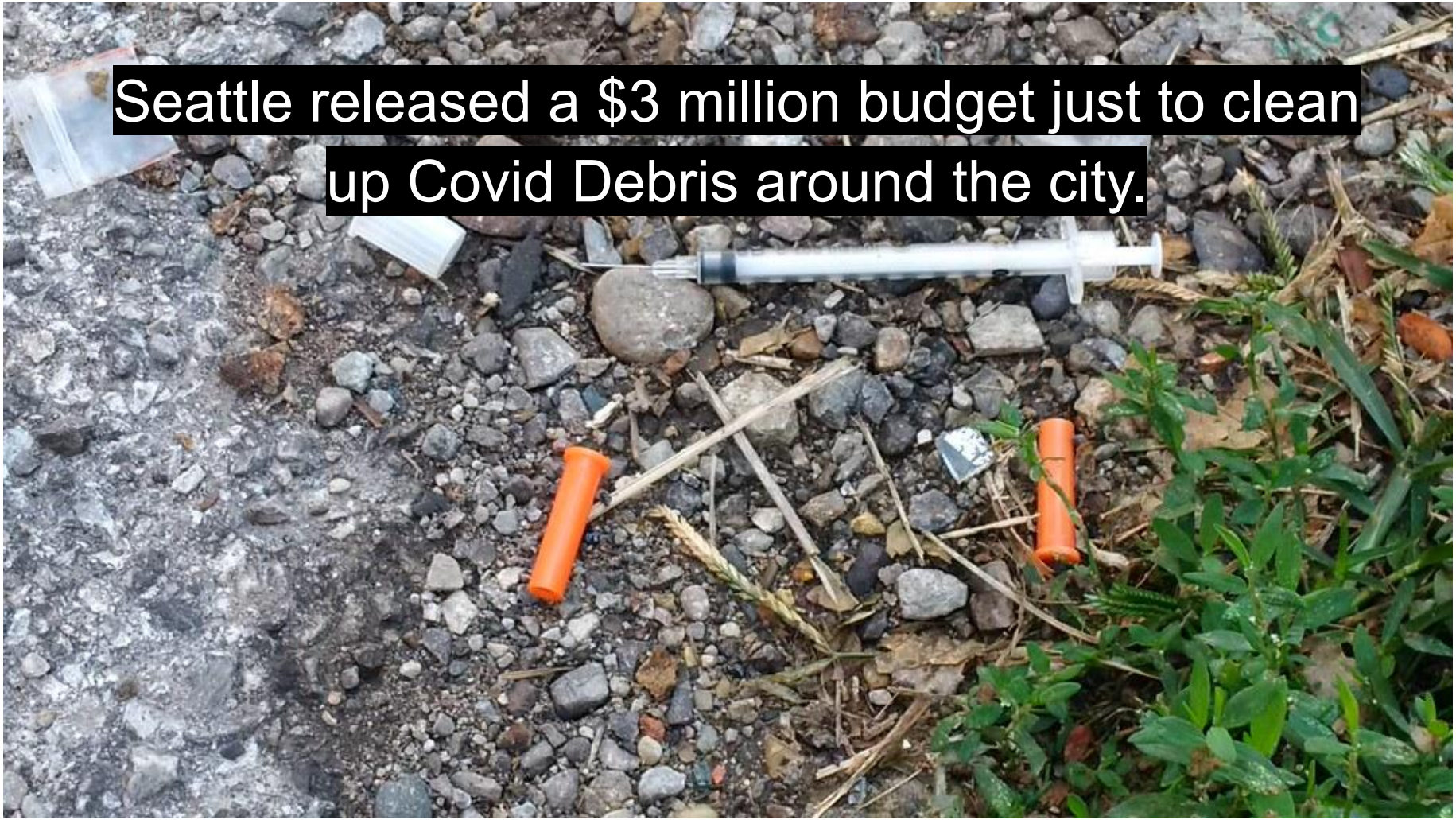
Faculty Mentors & Advisors

Lisa Milkowski, Ph.D. – *Robotics Mentor*
Shadrokh Samavi, Ph.D. – *Machine Learning & Artificial Intelligence Mentor*
Peter Rowan MBA - *Executive Director, Innovation and Entrepreneurship Center at Seattle University.*
Brian Allen - *ClimateTech Entrepreneur, Mentor, Advisor*

Seattle and other rapidly growing cities have major litter issues from everyday littering, illegal dumping, covid-19 debris, and homeless camps.

- **Over 12 million pounds of litter is tossed and blown onto roadways. Another 6 million pounds end up in parks and recreation areas each year in Washington State. This is a 600% increase from the 2,300 pounds in 2004.**
- **This litter gets washed into our waterways causing the Puget Sound to become toxic, acidic and bacteria Infested. This in turn kills our wildlife and business that depend on Puget Sound.**




Seattle released a $3 million budget just to clean up Covid Debris around the city.

- Washington State Department of Ecology and Washington Department of Traffic invest around $5 million each annually to clean the city.

We need a sustainable long-term solution

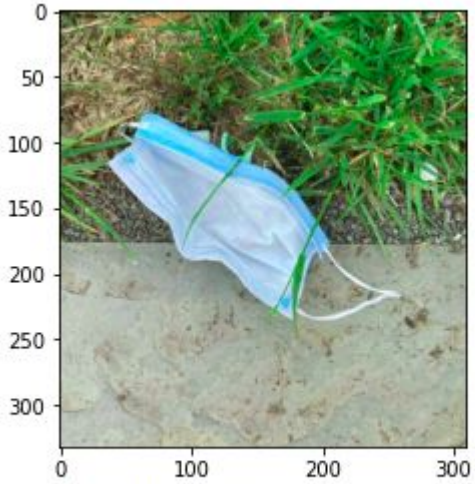
Waste Stream

Our robots have the ability to segregate garbage at the source instead of having to to do so at a manual sorting center.

A major hurdle to proper recycling is mixed waste in the recycle bins which cause perfectly good recyclable materials to end up in landfills.

Our custom designed and self trained machine learning model can identify recyclable waste from regular garbage.

It can also distinguish bio-hazardous material such as needles or covid 19 debris such as masks, gloves.



mask with a 99.67 percent confidence.

True label: glass
Predicted label: glass

True label: cardboard
Predicted label: cardboard

Community & Social Impact
Scale and Feasibility

Are robots stealing Jobs for front-line workers, campus cleanup crews ,king county transit waste managers ? No

We are supplementing jobs !

- Our business model will be helping other people from other industries to create their own litter clean-up companies
- We rent our Litter-Robot Networks for a monthly subscription plan or $5/hours plan

Our certification program enables these companies to open robotic repair shops

Opens the doors for people in labor-intensive industries like construction or auto mechanics to transition to a more sustainable and growing industry.

We are a black and women owned startup so we understand the issues

Offerings

BAB-BEE

Small robot with a human-like arm to pick up covid-19 related debris and needles.

HEFTY-BEE

A heavy ground-based robot to pick up larger litter like car tires and mattresses. Can lift heavy objects for workers and can go upstairs while keeping objects level. This robot is also used to bring other robots up and downstairs.

SEAHAWK-BEE

A drone that can fly over a reported area as soon as a citizen's report is made. This can be used to determine urgency, and monitor the amount of litter from a top-down perspective.