**Conrad Proposal — 100 Word Limit**

1. What is your innovative product/service?

BeachBot, is a dog-sized, solar-powered intelligent trash pickup rover. Constantly aware of its surroundings and trained using machine learning algorithms, it can identify beach litter, pick it up, and store it in a container on its back. Also able to work on a team of multiple or by itself, BeachBot will make the distinctions between people, seaweed, personal belongings, and actual litter. For safety, each fleet of BeachBots will be monitored from afar while the rovers operate around beachgoers. BeachBot will also function as a mobile trash can, allowing beachgoers a convenient trash can that saves the environment.

2. What problems is your product/service designed to solve?

In 2012, the Blue Ocean Society collected a total of 2,690 pounds of trash from over 26 miles of New Hampshire’s coasts. And it’s not just New Hampshire — from cigarette butts to plastic bags, beach litter threatens the environment across the entire globe. Specifically, one study found that plastic beach litter kills over 100,000 marine mammals each year. There are economic harms as well. California cities alone spend $428 *million* each year on cleaning crews for their beaches. Between labor costs and detriment to tourism, beach litter can weigh down on an economy, be it a small town or a large city.

3. What are the key features of your product/service that make it unique?

BeachBot is the first intelligent, mobile, litter clean-up system. By making use of advanced computer vision algorithms, it can look at its surroundings, find nearby pieces of trash, and start cleaning the beach. Additionally, the algorithm (which is on track to be finished by the end of 2016) would constantly be learning and getting better at its job. The rover will be able to communicate with other BeachBots to efficiently cover the entire beach, and finally, the trash-collection unit on it’s back will serve as a trash can for people to use around the beach as well.

4. How is your product/service innovative and different from other product/services intended to solve the same problems?

Though many clean-up efforts exist, they’re too small to make a dent in the worldwide totals of beach trash. Some beaches use large trucks that drive over the beach and sift through the sand to find trash; however, this approach is inefficient, time-consuming and costly. Our solar-powered rovers would cost much less than a truck, and wouldn’t incur fuel expenses. BeachBot is a smart pickup system that employs advanced technology rather than brute force to solve the problem. Finally, by serving as a mobile trash can, it actively encourages beachgoers to not litter, fostering a better environment for all.