

Problem

The average oil spill dumps over 40 million gallons of oil at a time. Oil spills are taking a deadly toll on both animals and humans as they release air toxins that are harmful to breathe, causing interference with heart rate, cardiac contractility, and overall functioning of organs in the body. The costs of oil spills are also extreme and uneconomical.

Our Solution

Aeroil will provide an answer to this long-standing issue with the help of aerogel, a synthetic porous derived from a gel that is hydrophobic and oleophilic. This means that this ultralight material can be used for absorbing oil at a rapid rate. After a spill, Aeroil is informed and bundles are distributed to the location with helicopters. An AI prediction model is then used to locate the aerogel after it has absorbed the oil.

Advantages

Aerogel has recently gained much traction for its ability to be used for oil spill cleanups, but there have been no plausible business ideas to execute this concept. Aeroil will do this in a timely and efficient manner, and will have outstanding implications, saving hundreds of thousands of lives and habitats every year.

The Process

1 Detect

Aeroil will be alerted by oil companies with the location and amount of oil that has been leaked so that we will be able to calculate the amount of aerogel needed to absorb the spill.

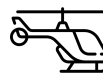
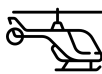
2 Distribute

By tracking the location of the oil spill after being alerted, Aeroil's helicopters will be sent to the spill scene and bundles of aerogels dropped in its surroundings. The aerogels will absorb the oil, and because of their elasticity, no structural damages will be inflicted on their anatomy.

3 Collect

Using an artificial intelligence prediction model, taking into account weather, wind, tides, and currents, the trajectory of the aerogels containing the oil from the initial location can be determined. Aeroil will then pick up the aerogels from these locations and be disposed of by recycling.

Key Steps



Detection of oil spill



Aerogel is dropped to oil spill location and absorbs the oil

AI predicts the location of the aerogel using weather data

The location is sent to a helicopter through an app and the helicopter picks up the used aerogel