**Overview of the algorithm:**

The algorithm is designed for a drone to conduct a search-and-rescue mission by finding targets (like potential fire zones) within a grid. In this setup, a grid with a certain number of targets is randomly generated. The drone starts at a specific point and decides where to move next based on a probability map, which it updates as it explores each cell.

**Working procedure of the algorithm:**

1. **Search Area Setup:** first it makes the whole search area in a grid and divide in in sections.
2. **Rescue Zones:** Some of these targets are chosen randomly as "rescue zones" that the drone needs to check. But in real cases the drone will try to detect smoke and fire in the forest. If it gets any smoke and fire, it will choose it as target zone.
3. **Probability Map:** The search starts with equal probability across all cells. As the drone moves, it updates these probabilities using Bayesian inference, depending on whether it finds a target in a particular cell.
4. **Updating Likelihood:** If the drone detects a target in a cell, it increases the probability that this cell has a target (assuming an 80% detection accuracy). The probabilities are then adjusted for the entire grid to ensure they add up to 1.
5. **Path Selection:** The drone chooses its next move based on which cell has the highest probability of containing a target. If there are multiple potential targets, it will move towards the closest one.
6. **Rescue zone selection:** when the drone travels to target zone that has fire or smoke the drone will try to make inference there to find any living being like person or animal. If it got any it will make a signal to the base station. In this visualization it has been shown as green dot in the target zone. And if there is no living element then it has been shown as red.