REPORT

Abstract:

This project aims to solve the problem the rescue squad faces during large fires. A swarm of 50 active bots scans an entire area to find the nearest victim.

Analysis:

Algorithm:

1. Created the population of victims and bots uniformly distributed in the selected area.
2. Evaluated each bots position with respect to the victims and finding the nearest victim from the bot.
3. If the current bot position is better than the previous bot position, then update the position.
4. Update the bot velocity and move them to new positions.
5. Go back to step 2 or stop when the target is reached.

Graph:

A graph showing the decreasing distance between the victim and bot.

Conclusion:

In this way, the swarm algorithm is implemented for finding a single target using swarm bots.