**Run Iterations and Results:**

* Text

  Description automatically generated1ST Run

Text

Description automatically generated

A-STAR PRM

* Text

  Description automatically generated2nd Run

Text

Description automatically generated

A-STAR PRM

* Text

  Description automatically generated with medium confidenceGraphical user interface, text, application

  Description automatically generated3rd Run

A-STAR PRM

* Text

  Description automatically generated with medium confidence4th Run

Text

Description automatically generated

A-STAR PRM

* 5th Run

Text

Description automatically generatedText

Description automatically generated

A-STAR PRM

Discussion:

The experimentation yielded the following results:

* Although PRM was able to generate a graph by selecting random points on the map, it required more computational resources than other methods, as shown in Figure 3.
* Pre-computing roadmaps can help the firetruck reach its destination faster, allowing it to cover more ground before the fire spreads, thus reducing its spread.

Reference:

[1][GitHub - AtsushiSakai/PythonRobotics: Python sample codes for robotics algorithms.](https://github.com/AtsushiSakai/PythonRobotics)

[2] [Planning Algorithms / Motion Planning (lavalle.pl)](http://lavalle.pl/planning/)