

Maze Pathfinding Benchmarking Tool

Maze Generator + Solver (A*, BFS, DFS) + Functional GUI

- **How to run standalone executable:**
 - **Linux:** Download `linux.exe` from **dist**
 - **Windows:** Download `windows.exe` from **dist**
- **Requirements to run main.py:** Pygame version 2.5.1 or later
 - **Quick install:** `pip install pygame`

How to Use:

1. Run main.py
 - Press **G** to generate a maze (20 x 20 default size)
 - Press **M** to draw your own maze (hold **LSHIFT** while dragging mouse to draw obstacles)
 - **Left click** in an empty cell (white) to place the start position
 - **Right click** in an empty cell (white) to place the end position
 - Press **A** to run A* algorithm
 - Press **B** to run BFS algorithm
 - Press **D** to run DFS algorithm
 - Press **P** to show the solution path
 - Hold or click **RSHIFT** to draw the step path
 - Press **C** to clear both the solution and step path
 - Press **Z** to zoom in (use arrow keys to move while zoomed in)
 - Press **H** to return to the help screen
 - Press **L** to view the console log (use up and down arrows to scroll)
 - Press **LCTRL** to view the admin panel (type to edit width + height of the maze and click and drag the sliders to change speeds)

Video

