

# Repository Update

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## New Structure

Minimal but ready to run a demo A\* pathfinder.

```
Terrain-Navigate/  
  docs/  
    technical_design.tex (unchanged)  
    module_plan.tex  
    technology_stack.tex  
    repository_update.tex  
  src/  
    terrain_navigate/  
      __init__.py  
      __main__.py          # demo entrypoint  
      data/loader.py  
      utils/voxel.py  
      graph/grid.py  
      cost/costs.py  
      planner/a_star.py  
  README.md  
  requirements.txt  
  .gitignore
```

## Rationale

Keep the core tight: data  $\rightarrow$  cost  $\rightarrow$  planner. Demo runs without external data, using a synthetic terrain. Later we can plug LAZ ingest and voxelization without changing the planner.

## Next

- Add LAZ reader (`laspy`/PDAL) and a simple gridding path.
- Optional visualization: save a PNG with the path overlay.
- Small unit tests for neighbors, heuristic admissibility.