

Project title: The Automated Cargo Planning Software

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Aria of interest:

- Automated planning for Cargo loading
- Path optimization

Cargo Loading Solution

For this software we are intend to suggest an optimized solution for automated cargo planning so the space inside of each carrier could be used with the most efficient usage, we are also looking for solutions to combine cargo planning with the path optimization so the software can decide the best type of the carrier and the path that it should take.

the main phases of this application are contain from this part:

1. **Automated Planing:** *suggest an algorithm to optimize the usage of space in carrier for shipping*
 - **Algorithm**
 - Effective functionality in compare with other algorithm
 - Containing every sort of real life limitation (e.q. weight, limitation for puting cargos...)
 - Fast responding
 - The ability to get customized planning
 - The ability to get priority from user
 - **User Interface**
 - Well desgned invironment for impoting data from user
 - Built in 3D engine to have a visual understanding of the solution
 - Suggested plannig blueprint
 - The Ability to save and load the data
2. **Path Optimizer:** *suggest an algorithm to optimize the path for each carrier, it manage the whole procedure of external shipping for a company*
 - **Algorithm**
 - Effective functionality in compare with other algorithm
 - Working with real world coordinations
 - Costomization ability by user-define features
 - Ability to integrate with Autimated planining algorithm
 - **User Interface**

- Prepherally working with map to showing the planning
- Easy to understand by user

Project Deliverables:

This project would lead to Windows application using it own data structure but it seems important to mention that the UI library for this application would be QT so it gives the application the ability to get compiled in other operation system such as Linux and Mac OS.