

[Processing Manual]

1. GUI :

KCLP Solution - Submitted by Team Vanished Gradient (Deep Raval, Jaymin Suhagiya)

1. Enter Rack & Switch Details:

Rack length : Rack breadth : Rack height :

Switch 1 (l, b, h, value, instances):

Switch 2 (l, b, h, value, instances):

Switch 3 (l, b, h, value, instances):

Switch 4 (l, b, h, value, instances):

Switch 5 (l, b, h, value, instances):

2. Hyperparameters:

Choose a Strategy: ☒ Orientation allowed ☒ Pairing allowed

Strategy 1: width,depth: Value||Volume

Strategy 2: width,depth: Value/Volume

Strategy 3: width:Value||Volume, depth:Value/Volume (Most Preferred)

3. Execute and Stats:

Execution Completed in: - Seconds

Remaining Switches:-

Total Value gained: -

% of total volume packed: - %

1. Go to GUI folder and open GUI.exe (it can take up to a minute to load) – it will also work if you don't have python installed or run GUI.py with command "***python GUI.py***" (Make sure to run it in the same directory).
2. Fill in all details and you're good to go (Make sure you choose appropriate hyperparameters like strategy, orientation and pairing).
3. GUI looks like above figure. All buttons and input fields are self-explanatory.

2. Console :

1. Go to appropriate solution folder (orientation allowed or not allowed).
2. Within folder you will find various pre compiled ".exe" (their names are self-explanatory s1,s2,s3 suggests three different strategies) files you can directly run and give input (in format described in 3rd point) in explanation or go to appropriate source file (.cpp) and compile (and run) it manually. Note that it requires $\geq C++11$.
3. For example for test case 3 (given by college) you will enter this as input:

70 42 60
20 5 20 25 20
30 15 10 30 15
20 15 7 20 22
25 20 10 35 18
10 8 10 15 30

4. If you have python3 (with matplotlib) installed (and set in environment variables) than you will automatically see visualization of placed switches in 3D. You can interact with it rotate it and also save it (Orientations may seem off because of axis scaling – if you have allowed orientation).
