Current work:

|  |  |  |
| --- | --- | --- |
| High | Medium | Low |
| ~~Take screenshot of all panels~~ | Check how scoring works | Performance improvements |
| ~~Highlight best panels~~ | Record the generation numbers | Create Materials |
| ~~Save results to text file~~ | Reduce variation dependent on generation number |  |
| Automate the model for long term running (have a time slot to run for some duration) | Change the creation direction matrix to be random instead of in order |  |
| Deselect the panels | Have a random number of panels per creation |  |
| Turn of deflection maps for zoomed in and label which one it is | Label code / rename methods for clarity |  |

Model Steps:

Create a new file so all old data is cleared out. Any existing objects mess with the panel creation due to the strange way in which robot numbers items and allows you to recreate objects which already “exist”.

Use the randomised floor plan generator to make the building shape. This creates panels on a 10x10 grid of nodes, which leads to be a 9x9 grid of panels. The panels are created in 2x2m squares to more accurately simulate the size of a room.

The floor plans are copied in relation to how many models want to be created. This then copies the panels that many times in the x direction then the y direction.

The first floor plan is then converted into a method which the computer can use as inputs. Taking everyone location with and without a node. These are turned into 1 or 0.

This input is then fed into NN models which are created. These use the inputs to determine the outputs of the column locations.

The columns are then created based on the output of the NN.

After this a calculation is run on the whole model. This is to get the deflections at each node.

When the deflections have been received they are calculated into a score which grades each model, this is based on the number of columns and the deflections.

The NN with the best score is then saved and passed down to the next generation of NN.

The whole model repeats from here.