

MUBLayout3D - Generating 3D Layout of Mixed-use Building from 2D Floorplan Images

Task

To develop a framework that generates 3D layout of mixed-use buildings from 2D floorplan Images

- Perform literature review to identify state-of-the-arts ML and heuristic based methods that address similar research challenge.
- Collect a 2D floorplan images dataset for multiple building types (transit hubs, educational buildings, shopping malls, museums, hospitals).
- Implement algorithms that performs the task described in Figure 1.

Project Characteristics

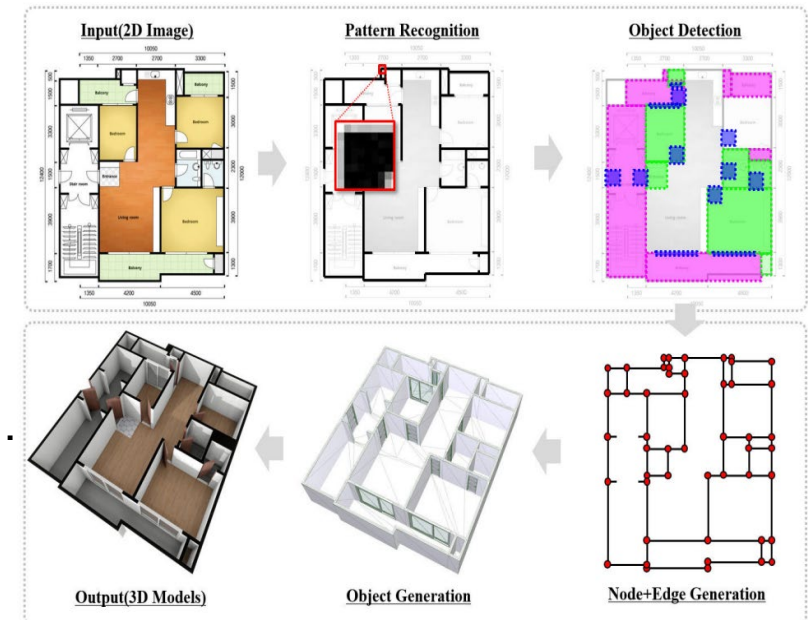
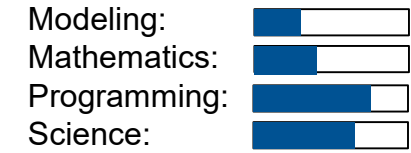


Figure 1: From 2D raster floorplan into 3D vector models [1]

[1] Park, S., & Kim, H. (2021). 3DPlanNet: Generating 3D Models from 2D Floor Plan Images Using Ensemble Methods. *Electronics*, 10(22), 2729.