

C.O.M.F.E.

Cr1nge.com

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What is C.O.M.F.E?

Cr1nge.com

Optimised

Model for

Furnishing

Excellence

Room Layout Configuration Tool



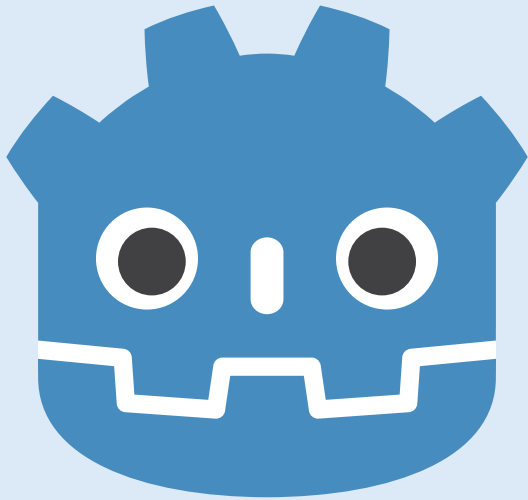
Features

Custom room
dimensions

Input objects
(Type and
Dimensions)

Generate and
regenerate room
configurations

Tools Used



GDScript for game engine

- Graphics handling
- Room generation

Version Control:

- Git/Github

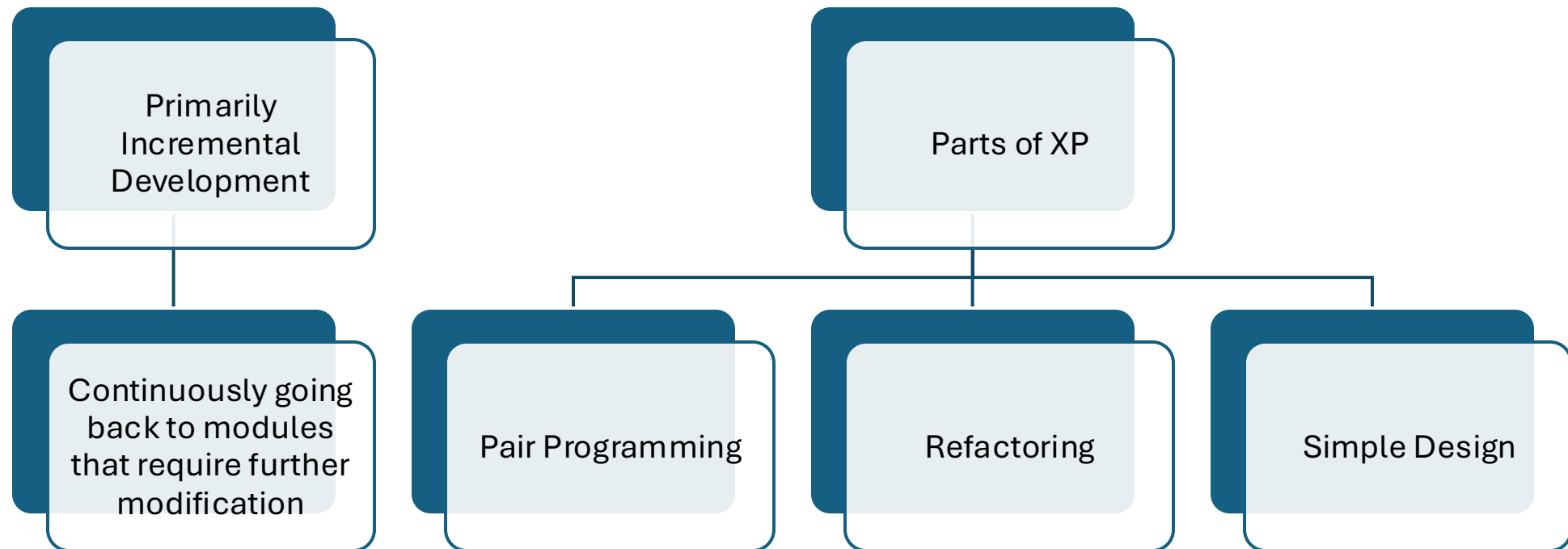
Python for Machine learning:

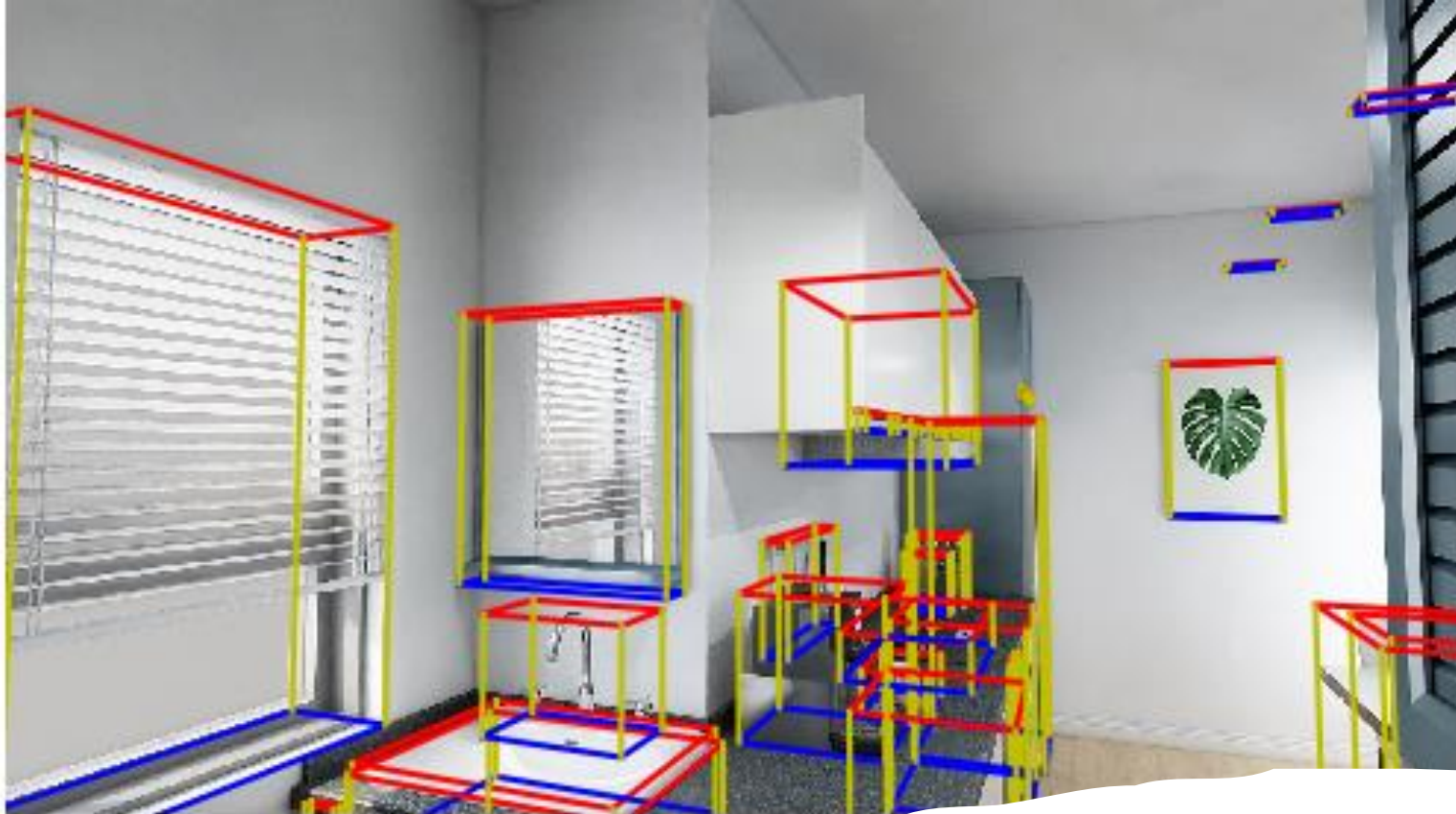
- Pandas: data analysis
- Scikit-learn: machine learning

• Communication:

- Discord

Development Processes





```

444529 444527,444527,0.0,-1.0,0.1,0.0,0.0,0.0,0.0,1.0,1296.5493,-3228.9138,348.658,169.826,281.1
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444531 444529,444529,-1.0,0.0,0.0,0.0,-1.0,0.0,0.0,0.0,1.0,-2841.7617,-12.32043,1210.6415,691.4700000
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444547 444545,444545,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,-5636.688,3672.6357,1343.0511,164.431,55.83,165.526,3495
444548 444546,444546,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,-5886.5557,3672.6357,1489.5161,164.431,55.83,165.526,3495
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```

ML/Data

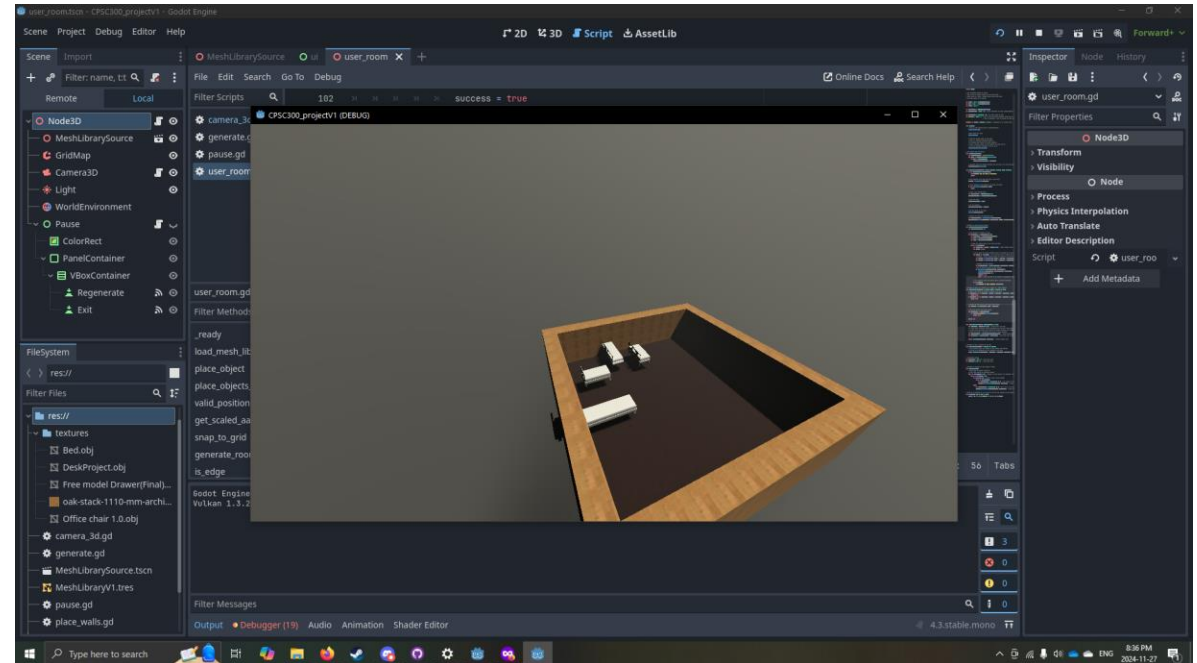


Challenges: Data

- Finding a suitable dataset
 - Using the dataset
 - PNGs
 - 170 - 510 GB
 - Bounding boxes – no labels
 - ML Model: 99.997% accuracy (sus)
-

Challenges: Godot

Lots of boundary issues...





Demo

Future Plans

Must Do:

- Improve machine learning model
- Script to generate rooms for the ML model (in progress)
- Connect ML model to room generator

Nice to Haves:

- Performance improvements
- Graphics improvements
- Ability to move objects after generation

References

Structured3D Dataset

<https://github.com/bertjiazheng/Structured3D/tree/master>



😊❤️😊 Thank
you 😊❤️😊

Questions?

