

SAGC-A68: "a space access graph dataset for the classification of spaces and space elements in apartment buildings"

Authors: "Amir Ziaee, Georg Suter, Laura Keiblinger"

Copyright: "Design Computing Group TU Wien, 2023"

Credits: "Design Computing Group TU Wien"

License: "GNU GENERAL PUBLIC LICENSE Version 3"

Version: "1.0.1"

Maintainer: "Amir Ziaee"

Email: "amir.ziaee@tuwien.ac.at"

Url: "https://github.com/A2Amir/SAGC-A68"

Description: "We present the SAGC-A68 dataset for the classification of spaces and space elements in apartment buildings. The dataset consists of space access graphs for 68 floor plans of apartment buildings designed or built between 1952 and 2019 from 13 countries. Each node in a space access graph is assigned to a space or space element class. Space and space element classes in apartment buildings that a GNN model classifies are shown in bold type in Table 1. We have identified 28 space and space element classes for the apartment buildings in the dataset."

Table 1: Space and space element class hierarchies and instance counts in the SAGC-A668 dataset.

Predicted classes are shown in bold type.

Space function classes		Space element classes	
Name	Count	Name	Count
Space		SpaceElement	
ResidentialSpace		SpaceEnclosingElement	
CommunalSpace		Opening	140
DiningRoom	3	Door	
FamilyRoom	6	InternalDoor	1428
LivingRoom	275	UnitDoor	291
PrivateSpace		SideEntranceDoor	84
Bedroom	495	ElevatorDoor	492
MasterBedroom	23	BalconyDoor	10
BoxRoom	2		
HomeOffice	8		
ServiceSpace			
Shaft	403		
StorageRoom	84		
WalkInCloset	2		
SanitarySpace			
Bathroom	274		
Toilet	145		
Kitchen	117		
LaundryRoom	57		
CirculationSpace			
VerticalCirculationSpace			
Elevator	86		
Stairway	70		
HorizontalCirculationSpace			
Entrance	67		
Hallway	12		
MainHallway	18		
InternalHallway	152		
External			
AccessBalcony	19		
Loggia	108		