SFS-A68: "A dataset for the segmentation of space functions in apartment buildings"

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

Description: " We present the SFS-A68 dataset for space function segmentation in apartment buildings. The dataset consists of input and ground truth images for 68 floor plans of apartment buildings designed or built between 1952 and 2019. Each pixel in a ground truth image is assigned to a space function class. Space function classes in apartment buildings that are classified by the space function segmentation network are shown in Table below, right column. We have identified 22 space function classes for the apartment buildings in our dataset. Each layout element in an input image is colored according to a unique class color (Table below, left column). Space element classes may be helpful as metadata to determine space function classes. The defined class hierarchy of the dataset with the unique RGB color code of each class can be seen below "

Layout element classes	Space function classes
<pre>[root]
├── [**Space**]
│   ├── (102,102,122)[InternalSpace]
│   └── (161,162,155)[ExternalSpace]
└── [**SpaceElement**]
├── [SpaceContainedElement]
│   ├── [CirculationElement]
│   │   ├── (230, 184, 175)[FlightOfStairs]
│   │   └── (102, 1, 30)[Landing]
│   ├── [FurnishingElement]
│   │   ├── (253, 223, 162)[KitchenElement]
│   │   └── (248, 193, 79)[SanitaryElemen]
│   └── [EquipmentElement]
│   └── [HomeAppliance]
│   └── (159, 140, 81)[TextileCareAppliance]
└── [SpaceEnclosingElement]
├── (109, 189, 110)[Opening]
├── (255, 107, 0)[Partition]
├── (200, 255, 0)[Window]
└── [Door]
├── (0, 255, 0)[RegularDoor]
├── (72, 112, 39)[UnitDoor]
└── (187, 244, 154)[ElevatorDoor]</pre>	<pre>[Space]
├── [**ResidentialSpace**]
│   ├── [CommunalSpace]
│   │   ├── (107,74,101)[DiningRoom]
│   │   ├── (166, 206, 227)[FamilyRoom]
│   │   └── (242, 0, 192)[LivingRoom]
│   └── [PrivateSpace]
│   ├── (0, 255, 248)[Bedroom]
│   │   ├── (0,175,175)[MasterBedroom]
│   │   └── (4,72,148)[BoxRoom]
│   └── (194, 123, 160)[HomeOffice]
├── [**ServiceSpace**]
│   ├── (253, 237, 0)[Shaft]
│   ├── (255, 182, 0)[StorageRoom]
│   ├── (191, 144, 0)[WalkInCloset]
│   └── [SanitarySpace]
│   ├── (255, 0, 0)[Bathroom]
│   ├── (69, 129, 142)[Toilet]
│   ├── (131, 126, 197)[Kitchen]
│   └── (0, 0, 255)[LaundryRoom]
├── [**CirculationSpace**]
│   ├── [VerticalCirculationSpace]
│   │   ├── (9, 244, 156)[Elevator]
│   │   └── (168, 134, 113)[Stairway]
│   └── [HorizontalCirculationSpace]
│   ├── (151, 143, 141)[Entrance]
│   └── (125, 62, 32)[Hallway]
│   ├── (225, 138, 96)[MainHallway]
│   └── (155, 94, 65)[InternalHallway]
└── [**ExternalSpace**]
├── (255, 255, 22)[AccessBalcony]
└── (121, 56, 145)[Loggia]</pre>