Room Classification from Connected Floor Plan Graphs

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Abstract

Recent work in computer vision has explored using machine learning to digitize the floor plan: the architectural diagrams home builders use when constructing a new home. Most work has been focused in "raster-to-vector" approaches, which attempt to turn raster images of the floor plan into a set of vectors describing a wall, window, or other 2D object. While post-processing has shown some success in associating detected rooms with their purpose, these approaches largely rely on supplementary information such as text descriptions and icon detection. We explore whether the spatial information of detected rooms is sufficient to determine its purpose. In particular, we show that a graphical encoding of room adjacencies contains enough information alone to achieve results approaching those of recent work.

1 Introduction

References