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Applying Big Data to Understand Urban Design Quality: The Correlation between Social Activities and Automated Pedestrian Counts in Dilworth Park, Philadelphia

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Abstract : Presence of people and intensity of activities have been widely accepted as an indicator for successful public spaces in urban design literature. This study attempts to predict the qualitative indicators, presence of people and intensity of activities, with the quantitative measurements of pedestrian counting. We conducted participant observation in Dilworth Park, Philadelphia to collect the total number of people and activities in the park. Then, the participant observation data is compared with detailed pedestrian counts at 10 exit locations to estimate the number of park users. The study found that there is a clear correlation between the intensity of social activities and automated pedestrian counts.

Keywords : automated pedestrian count, computer vision, public space, urban design
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