**Urban Shadow Mapping for Smart Planning**SE-C-12

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Urban areas in hot, dry climates face challenges in creating comfortable public spaces due to limited natural shade. This project addresses the lack of accessible, real-time data on shaded areas with information essential for both urban planning and residents’ daily decisions.  
The research includes two stages. First, a public survey examined residents’ habits, comfort levels, and awareness regarding shade. The results showed a strong demand for accurate information on shaded areas throughout the day. The second stage involves developing a smart system that uses light sensors and GIS to generate real-time shadow maps. These maps will support city planners and the public. A pilot will test the system’s effectiveness. The goal is to promote better planning and improve urban comfort.

Keywords: comfort, gis, sensor, shade, urban planning