

The Social Life of Small Urban Spaces 2.0

Three Experiments in Computational Urban Studies

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Abstract. This paper introduces a novel framework for urban analysis that leverages computational techniques, along with established urban research methods, to study how people use urban public space. Through three case studies in different urban locations in Europe and the US, it demonstrates how recent machine learning and computer vision techniques may assist us in producing unprecedentedly detailed portraits of the relative influence of urban and environmental variables on people's use of public space. The paper further discusses the potential of this framework to enable empirically-enriched forms of urban and social analysis with applications in urban planning, design, research, and policy.

Keywords: Data Analytics, Urban Design, Machine Learning, Artificial Intelligence, Big Data, Space Syntax