

Study on Distribution of Urban Functional Area and Population Heat Based on Big Data—A Case of Jianggan District of Hangzhou

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Abstract

In recent years, because of the rise of big data, research of urban space has shifted from single-point static analysis to multi-temporal dynamic analysis. In Jianggan District, the separation of workplace and residence is serious. In order to explore the rules of distribution, based on CRITIC weighting method, nuclear density estimation and multiple linear regression analysis, this study found the following points:①The rules in the distribution of facilities. the educational facilities are not arranged in combination with other facilities.②The rules in the temporal pattern of population heat. In spatiality, distribution of population had two centers. In temporality, the area of gathering population was stable on weekdays. The area of gathering population was decreased firstly and then increased on weekends. ③ There was a significant correlation between the dynamic area and population heat. Medical, accommodation, education, financial office, shop facilities are positive to population heat. Catering and traffic are negative to population heat.