

IS THE CURB 80% FULL OR 20% EMPTY? ANALYSIS OF SAN FRANCISCO'S PARKING EXPERIMENT

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Many cities are deploying smart parking information systems. The goal of smart parking initiatives is to reduce the number of cruising drivers. As a rule of thumb, smart parking interventions typically set average occupancy targets for each block throughout the day. We seek to explore how drivers experience these average occupancy targets. Using data from one year of observations from 17,000 sensors, we analyze how average occupancy is experienced by drivers in San Francisco.

Our contributions include the development of an empirical methodology based on the Erlang C formula to estimate driver cruising and parking demand from average parking occupancy. In addition, we develop a strategy to estimate the censored arrival rate for each block. Finally, we estimate the expected number of blocks a driver must cruise before finding a space, and some preliminary evidence for impacts of SFpark over one year.