

BILL MOIR MARKETING SPEAKER SERIES



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Using Text Analytics Models to Examine Consumer Mobility Patterns

Mobile location data has emerged as a rich data source for marketers. Collected by commercial vendors, such data consist of geographic coordinates that can be enriched with information about the point of interest (POI) located at the coordinates, enabling the use of text analytic methods to examine consumer mobility patterns. In this research, we develop a hierarchical, time-varying topic model to examine how the share of visits across business categories shifted over time. We use location data collected from mobile devices in the state of Georgia between January 2020 and August 2020, a time period that includes the state-mandated shelter-in-place order at the beginning of the COVID-19 pandemic, we investigate whether and how quickly consumers returned to “business as usual” in their patterns of frequenting different businesses. Our analysis reveals that temporal shifts in visitation behavior are related to the severity of the pandemic and demographic factors. We also show that some business categories are slower to return to their pre-COVID levels of consumer visits, indicating an uneven economic recovery across industries. Our research suggests how marketers and policymakers can draw insights from large-scale historical location data by employing text analytics methods.