

156 Publicly reported trail experiences: A mixed-methods dive into the internet corpus

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While many visitor monitoring efforts measure discrete and quantifiable attributes, such as spatial distribution of visitors or economic values, many aim to capture more subjective qualities. Monitoring visitor experience is one such undertaking. Visitor experience extends beyond objective qualities about the recreation environment, and studying it requires understanding nuances about visitors' perspectives that can be difficult to generalize. These perspectives can be studied qualitatively to capture in-depth and nuanced data, or quantitatively in order to generate more comparable or generalizable results. Both of these approaches are strong and useful, and in this study we aimed to capture the strengths of both these approaches in a novel mixed-methods methodology using publicly available web data. Using trip report data from a popular trail website, we were able to describe visitor experiences in a way that is both large in scale and reflective of subjective experiences.

Our approach begins with an exploratory machine learning model followed by an explanatory qualitative coding phase, and results are presented descriptively as a topic model map with accompanying narrative visitor experience vignettes. To pilot this approach, we investigated the visitor

experience along the Potomac Heritage National Scenic Trail Network (POHE) in the United States, with the goal of evaluating both the big-picture visitor experience across the entire trail network and the spatial variability. The POHE trail network is several hundred miles long and offers a variety of experiences spanning three states and the District of Columbia. On the website alltrails.com, visitors have left short reviews of over 100 small lengths of the trail network that together comprise POHE. Additionally, managers of POHE have identified several trail segments that they manage as distinct units. We scraped the review text from alltrails.com and used a machine learning text analysis process called Latent Dirichlet Analysis to identify common topics across the entire trail, as well as differences between topics that occur in each trail segment. We then selected random occurrences of each topic and qualitatively evaluated their context and term usage to further clarify how the topics relate to visitor experience. This also allows us to produce an overall description of visitor experience along the entire POHE network. Finally, we evaluated each trail segment based on its unique combination of topics and the contexts of those topics to produce visitor experience vignettes.