Tourism Data Visualization of Vipava Valley

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Problem

Currently, there is no interactive visualization platform available for the **Vipava Valley** that combines tourism and weather data. Existing sources present these datasets separately and in static formats, which makes it difficult for users, researchers, and local authorities to explore correlations between tourism trends and environmental factors across different municipalities.

Solution

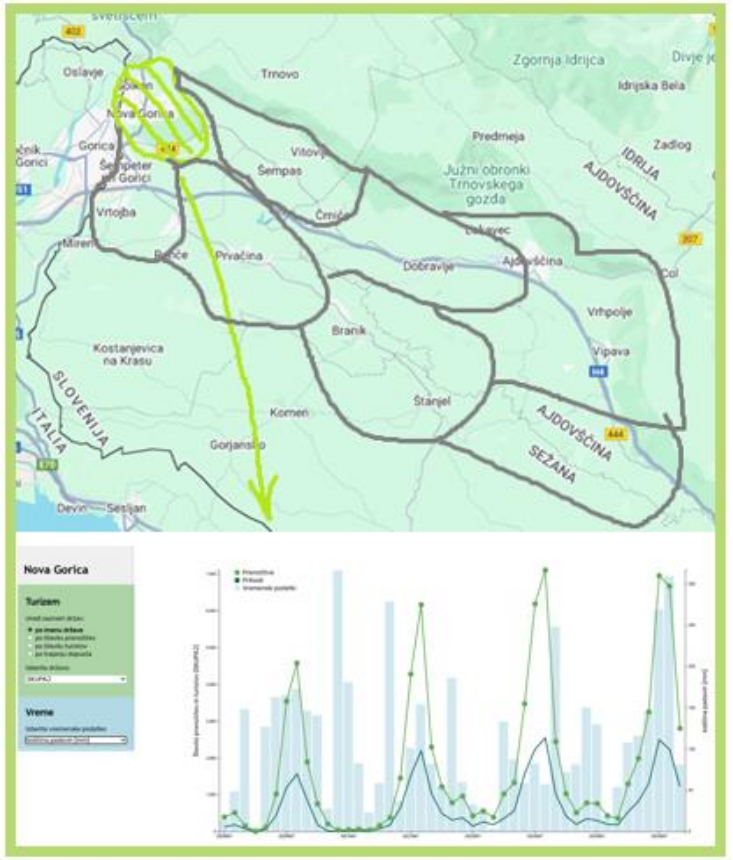
We propose developing an interactive D3.js web application that visualizes various tourism and weather datasets for each municipality in the **Vipava Valley**. The platform will include an interactive map and dynamic graphs, allowing users to easily explore patterns, compare locations, and analyze temporal trends. This approach will provide a more engaging and informative way to understand the relationship between tourism activity and weather conditions.

Data

The data for this project will be sourced from two official Slovenian institutions. Tourism data will be obtained from the Statistical Office of the Republic of Slovenia (SURS) via the SiStat portal, which provides detailed statistics on tourist arrivals, overnight stays, and accommodation capacities by municipality. Weather data will be collected from the Slovenian Environment Agency (ARSO), which offers open access to historical and real-time meteorological measurements such as temperature, precipitation, and wind speed.

Concept Design

The concept is based on a two-level interaction design. At the first level, users are presented with an interactive map of the **Vipava Valley**, divided by municipalities. Each municipality is clickable, enabling users to select a specific area of interest. Upon clicking, the application navigates to a dedicated page for that municipality, where a series of dynamic and interactive visualizations are displayed. These visualizations may include line charts, bar graphs, and other interactive elements that allow users to explore temporal trends, compare different types of data, and uncover correlations between tourism activity and weather conditions. This approach ensures that users can both gain an overview of the entire region and drill down into detailed data for each municipality, making the exploration intuitive and engaging. By combining spatial and temporal data in an interactive format, the platform provides a comprehensive, user-friendly tool for understanding tourism dynamics and environmental factors in the **Vipava Valley**.



Related Works

Exploring Interactive Tourism Data Visualization for Effective Decision-Making and Spatial-Temporal Analysis (MML Chang, IPX Lee, JJF Kho)

Sensing and making sense of tourism flows and urban data to foster sustainability awareness: a real-world experience (Catia Prandi, Valentina Nisi, Miguel Ribeiro, Nuno Nunes)

Data Visualization on Tourism (Hanlin Xiao, Jie Cheng, Yunfan Lyu, Yuqing Ma, Dongxu Sun, Qian Wu)