Exploring Herrenhausen Gardens – Development of an Location Based Interactive Mobile Web Application for Enriching Visitors' Knowledge and Experience

Master thesis at ikg (language: EN and DE)

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Introduction

Herrenhausen Gardens are one of Hannover's most famous attractions. During their visits people can enjoy a large variety of different attractions like impressive plants and sculptures. However, often visitors want to know more about these sights and thus make use of maps and brochures. Although these traditional sources offer interesting information about the gardens, they do not provide the level of interactivity and contextual information that a mobile web-based application can offer.

Herrenhausen Gardens. Image: ©Coptograph

In this thesis, therefore, a web-based application for mobile devices, which people carry with them anyway, is to be developed. This application is intended to offer location based additional information about the relevant sights (POIs) to the user via an attractive and intuitive user interface. As the various POIs are sometimes located relatively close to each other, a suitable concept for determining the relevant POI has to be developed. For this purpose, among other things, the current location and orientation of the user can be taken into account. Furthermore, a possibility of collecting the users' anonymized trajectories is to be implemented as this information can provide important insights into, for instance, typical routes or the attractiveness of the different POIs and can support the planning of the gardens' design.

Illustration of the concept. Image artificially generated by Stable Diffusion.

Tasks

1. Review of the existing work and relevant literature
2. Development of the web-based mobile application
    a. Development and implementation of an attractive and intuitive concept for a user interface
    b. Integration of the provided POI information
    c. Determination of the relevant POI by considering information like the user's current location and orientation
    d. Integration of a possibility to collect and store a user's trajectory
3. Conduction of an appropriate evaluation of the application, e.g., field test, user study, …
4. Writing the documentation and the report

Resources

▶ A collection of the corresponding information about the POIs is provided

Requirements

▶ Knowledge in the domain of web programming (e.g., HTML, JavaScript, CSS, …)

Contact

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