BABES-BOLYAI UNIVERSITY CLUJ-NAPOCA
FACULTY OF MATHEMATICS AND COMPUTER
SCIENCE SPECIALIZATION COMPUTER SCIENCE

DIPLOMA THESIS

MOBILE APPLICATIONS FOR TOURISTIC ASSISTANCE

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2019

Contents

1. Mobile applications systems for touristic assistance

1.0.1 Introduction

Individuals are by definition curious and adventurous beings, keen on conquering new places, discovering cultures and enriching their knowledge. During their lifetime, humans accumulate information from all sorts of mediums, from books, online resources, personal experiences or interactions with others. As we all know, information linked to an existent space or event is more likely to be remembered. That is why people tend to travel and make memories. From this need of satisfying their curiosity, tourism was born.

When it comes to tourism, one can picture a quite complex mindmap centering this topic, combining words like *travel, destination, accommodation, entertainment, sightseeing, guide, information, vacation, international, attractions, leisure* and many others related. Even though we all have been tourists at one point in our lives, giving a suitable definition to tourism can be a difficult task considering all the things it implies. If we agree to refer to it as "the act and process of spending time away from home in pursuit of recreation" [4] we can get together through a part of the process. First deciding where to go, searching from transportation and accomodation, getting in contact to your host, finding information about the place, where to eat, dealing with tickets for the attractions and finally actually getting there just to figure out that you have no idea how the local transportation is scheduled. For some this is a source of distress and a hard time. As a consequence, tourists often find themselves skipping or forgetting steps in planning the perfect vacation, because there is so much to take in account and time is limited.

After the internet burst in the last decade, it became clear that most of the traditional services would be replaced by more accessible online applications. We witnessed the rise of various websites, be it social networks, E-commerce, video platforms, online encyclopedias or business profiles, therefore it was natural for the touristic sector to move online. Technology brought new means of communication, high speed, wide accessibility, remote and secure payments, information portability, exact geographical localization, cross-language support, augmented reality, instant messaging even on long distances and significant increases in image quality. If we look closely, we can discern that each one of these innovative technologies finds its place in touristic applications. But how would it be to keep all this information inside of ones pocket?

As a global survey on smartphones users worldwide shows [1], more than 2.87 billion users are said to own a smart mobile device by 2020, with an already outstanding number of 2.71 billion users in 2019. Smartphones are becoming mainstream, not at all a luxury. High availability for mobile data, provided by mobile carriers at affordable fares strikes an important part in this context. A study shows that the majority of internet traffic comes from mobile devices [5].

1.0.2   Touristic assistance concept in society

Classification of mobile applications accessible in tourism sector

1.0.3   Existent services for localisation

2. Developing mobile applications

One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown belly, slightly domed and divided by arches into stiff sections. The bedding was hardly able to cover it and seemed ready to slide off any moment. His many legs, pitifully thin compared with the size of the rest of him, waved about helplessly as he looked. "What's happened to me?" he thought. It wasn't a dream. His room, a proper human room although a little too small, lay peacefully between its four familiar walls. A collection of textile samples lay spread out on the table - Samsa was a travelling salesman - and above it there hung a picture that he had recently cut out of an illustrated magazine and housed in a nice, gilded frame. It showed a lady fitted out with a fur hat and fur boa who sat upright, raising a heavy fur muff that covered the whole of her lower arm towards the viewer. Gregor then turned to look out the window at the dull weather. Drops

3. Technical aspects

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4. Description of the application

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5. Conclusion and future work

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