Campus Navigation Based on Augmented Reality

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Abstract:A method known as navigation concentrates mostly on the act of observing and managing how people, vehicles, and perhaps other things navigate through one location to the next, including: oceanic, terrestrial, and air navigation. The college navigator is an android smartphone software that is mostly use in guiding paths within campus buildings, such as colleges, hospitals, malls, etc. Today's smartphones are much more than just communication tools. Mobile phones in particular become tools that facilitate our daily and professional lives. The usage of mobile apps have grown significantly in recent decades in tandem with the technological advancements and the attractiveness of such gadgets. Location-based apps with augmented reality aspects are indeed feasible thanks to modern technologies like GPS, sensors, compass, and accelerometer which may be utilised to identify the direction of smartphone. People may get instructions through one point to the next using various paid navigational software, including Apple maps Google Earth, Yahoo Maps, street view and Mapquest. Such programmes aren't capable of produce directions which may not exactly accurate like a pathway on college might need; instead, people should explore across established roadways.

INTRODUCTION

An intricate architecture makes up an university. It might be difficult to get about and discover destinations, particularly for fresh scholars as well as those using this for very debut moment. The institution is significantly bigger beyond two sq.km, taking substantially additional space. The site features a wide variety of structures. The majority of the structures are linked to one another, several would even via subterranean corridors. Despite the presence of maps at certain locations on university, people cannot always rely on them to guide them to their desired location. They may attempt to find a route to their destination using such fixed maps, but once they start moving in the desired direction, they are on their own.

While using a navigation system in a vehicle to go to a certain area is relatively widespread, pedestrian navigation systems are quite rare. So, with the aid of contemporary technology, how can we assist new students and other uninitiated individuals in being oriented on the campus and supporting them in discovering places on campus. "CAMPUS NAVIGATOR" is the appropriate response to this query. Users of our Campus Navigator programme may get considerably more precise routes than what a currently available commercial product can provide. Compared to the most straightforward form of this kind of application, our implementation of a navigation application necessitates a significant deal more sophistication. A fundamentally simple navigation application would not be hard to make. Campus locations (buildings, parking lots, etc.) and transitions between the sites (roads, walkways, etc.) would be kept as vertices and edges of a graph structure, respectively, to describe the campus. With the help of this programme, the user is guided from his present position to the precise spot in the camera he is looking for. It makes it easier for the user to navigate the campus on foot.

The major goal of this approach is to provide scholars and parents with a sustainable smartphone alternative whenever users move about the institution. Additionally, the program's effectiveness, consistency, user-friendliness, and quickness are all desired outcomes for a tiny university setting. The aim is to decrease time wasting and disappointment while increasing program performance. Also with planned approach, this is anticipated that both guests and students to the institution would find it helpful and educational to traverse.