Computer Science Master Thesis Presentation

Multilingual Digital Signage using Computer Vision and Bluetooth Beacons

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Examination Committee:
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Abstract:

Due to rapid globalization and changing lifestyle, more people are now visiting foreign countries for business and travel. However, important signages like traffic signs, safety signs and informational signs are displayed in only one language (usually the native language). There are many languages in the world and it is impractical to install signages in all the languages. In this research, by combining computer vision and bluetooth beacons, multilingual digital information is displayed on the user's smartphone. A mobile application is constructed which enables the user's smartphone to listen to nearby digital signages (with bluetooth beacons) and display the respective signage information in user's preferred language. The application also enables the user to capture an image of a printed signage, extract the information in the signage and translate the information to user's preferred language. Optical Character Recognition (OCR) is used to extract the text from the image and Google Translate is used for the language translation. This system was implemented in the university campus and experiments were conducted by to determine the feasibility of using this system on a larger scale. It was found that the system helps the users to understand their surroundings better in their preferred language.

11:00 am, Thursday, April 25rd, 2019
Sierra Hall 1111

All students and faculty are invited

An Academic Affairs Event