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OLSUS - Optimize location search using Street View

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ABSTRACT

Usage of online maps has grown to be an essential in the contemporary world and for travelers since it allow users to access them from any place at any time. There are few main online maps people use such as Google map, Bing map, Yahoo map etc. Usually people find more accurate results from Google maps and therefore many use Google maps as the default map. But there are some occasions where the map does not give any results for searched locations in rural areas. This make it very inconvenient for the travelers since they can even be lost due to that. Also sales representatives who have to go for sales in rural areas find it difficult find unknown small grocery shops and other outlets which are not shown in the map. There is no option when the map says “No such place found” which would not impress the end users. Because of that Google themselves started the Google map community as a solution to improve the map experience but still there are many places which are not shown on the google map. So to overcome this problem OLSUS system was introduced which uses the street view images to capture different name boards in either side of the road and process them to find locations that cannot be found in the map. A single deep neural network was used for the text recognition and detection and the implemented system was tested thoroughly under different conditions. And the system was evaluated by evaluators of various domains.

Subject Descriptors: Computer systems organization → Neural networks •Computing methodologies → Computer vision • Computing methodologies → Scene text detection • Computing methodologies → Scene text recognition • Computing methodologies → Scene understanding • Information systems → Database utilities and tools • Information systems → Indexed file organization • Theory of computation → Pattern matching • Computer systems organization → Client-server architectures • Software and its engineering → 3-tier architectures • General and reference → Reference works • General and reference → Surveys and overviews

Key Words: Text detection, Natural scene text recognition, Word spotting, Multi-oriented text, Convolutional neural networks.