New Strategies for Automated Random Testing

MIAN ASBAT AHMAD

Abstract

This is the abstract text with the formula $v_L(t) = \int_{-\infty}^{t} \frac{di_L}{dt}$. This paper describes the computation of feature point correspondences using the spectra of a Hermitian property matrix. Firstly, a complex Laplacian (Hermitian) matrix is constructed from the Gaussian-weighted distances and the difference of SIFT angles between each pair of points in the two images to be matched. Matches are computed by comparing the complex eigenvectors of the Hermitian property matrices for the two point sets acquired from the two images. Secondly, we embed the complex modal structure within Carcassoni's iterative alignment method to render it more robust to rotation. Our method has been evaluated on both synthetic and real-world data.

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Acknowledgements

Declaration

This thesis has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree other than Doctor of Philosophy of the University of York. This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by explicit references.

I hereby give consent for my thesis, if accepted, to be made available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

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Date . . . .

Publications:

Some of the material contained in this thesis has appeared in the following published conference and workshop papers:

Kazakov, D. and Shahid, A. (2008). Extracting Multilingual Dictionaries for the teaching of CS and AI. In *4th UK Workshop on AI in Education* as part of the annual SGAI International Conference on Innovative Techniques and Applications of Artificial Intelligence, Cambridge, UK.

Kazakov, D. and Shahid, A. (2009). Unsupervised Construction of a Multilingual WordNet from Parallel Corpora. In *Workshop on Natural Language Processing methods and Corpora in Translation, Lexicography, and Language Learning (RANLP '09)*, Borovets, Bulgaria.

Shahid, A. and Kazakov, D. (2009). Automatic Multlingual Lexicon Generation using Wikipedia as a resource. In *Proceedings of the International Conference on Agents and Artificial Intelligence, (ICCART '09)*, Porto, Portugal.

Shahid, A. and Kazakov, D. (2010). Retrieving Lexical Semantics from Parallel Corpora. *Polibits, 5*, 25-28.

Shahid, A. and Kazakov, D. (2011). Using Multilingual Corpora to Extract Semantic Information. In *Proceedings of the Symposium on Learning Language Models from Multilingual Corpora, AISB'11 Convention*, York, UK.

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