Accepted Manuscript

Accurate and Interpretable Classification of Microspectroscopy Pixels Using Artificial Neural Networks

Petru Manescu, Young Jong Lee, Charles Camp, Marcus Cicerone, Mary Brady, Peter Bajcsy

PII: \$1361-8415(17)30009-9 DOI: 10.1016/j.media.2017.01.001

Reference: MEDIMA 1216

To appear in: Medical Image Analysis

Received date: 15 June 2016
Revised date: 19 December 2016
Accepted date: 5 January 2017



Please cite this article as: Petru Manescu, Young Jong Lee, Charles Camp, Marcus Cicerone, Mary Brady, Peter Bajcsy, Accurate and Interpretable Classification of Microspectroscopy Pixels Using Artificial Neural Networks, *Medical Image Analysis* (2017), doi: 10.1016/j.media.2017.01.001

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- The problem of accurate and interpretable labeling of spectral images is addressed.
- A tandem of Artificial Neural Network (ANN) models is designed to achieve accuracy.
- Labelling rules are generated from the tandem to deliver an interpretable model
- The labeling method was evaluated on labeled pixels and reference rules.
- \bullet The labeling accuracy was determined to be 85% (pixels) and 96% (rules).

Download English Version:

https://daneshyari.com/en/article/4953427

Download Persian Version:

https://daneshyari.com/article/4953427

Daneshyari.com