

Biomedical Informatics and Pre-college STEM Education

Digitized histopathology slide image analysis for pre-cervical cancer assessment

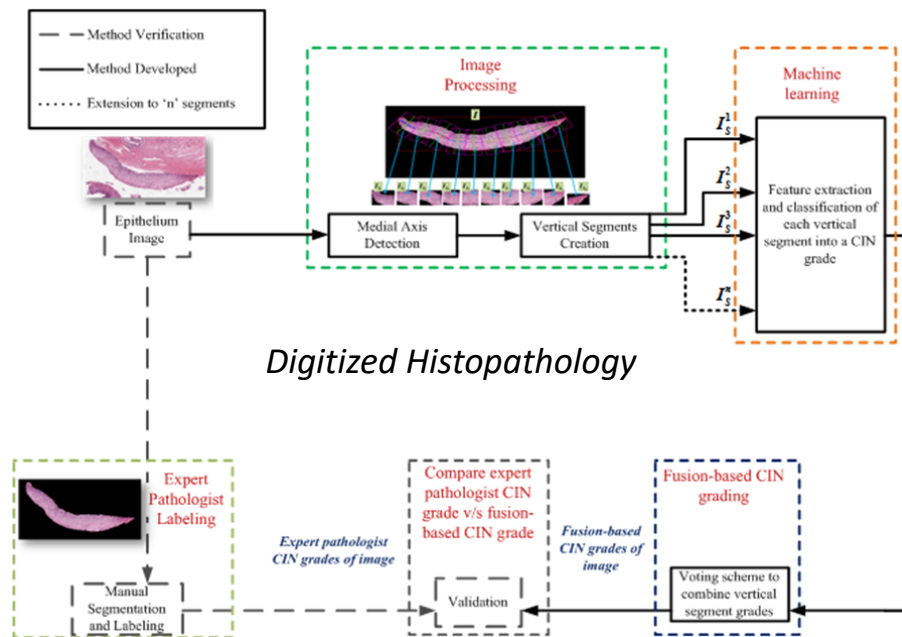
- Deep learning, imaging, and data fusion technique development for epithelium detection, segmentation, localized feature extraction, and CIN assessment

Dermatology skin lesion image analysis

- Development of machine and deep learning approaches to detect and segment key lesion features
- Exploration of computational intelligence and data fusion techniques for clinical and dermoscopy skin lesion image discrimination

Longitudinal study of Missouri S&T student development for students with precollege Project Lead The Way STEM program exposure

- Student assessment of career choices, academic performance, retention and precollege backgrounds



Localized image analysis with data fusion improves diagnostic assessment

PoC: R. Joe Stanley, Professor of ECE,
Coordinator, Computer Engineering
Undergraduate Studies
stanleyj@umsystem.edu,
<http://web.mst.edu/~stanleyj>



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- National Science Foundation

Keywords

- Image and signal processing, data fusion, computational intelligence, pre-college engineering education

Recognitions

- IEEE-USA Professional Achievement Award for "sustained contributions to pre-university engineering education"
- IEEE-Eta Kappa Nu C. Holmes MacDonald Outstanding Teaching Award