IMAGE INFORMATICS: COLON CANCER CELL SEGMENTATION

Presented by:

Hammad Mir

c0070933

03/02/2022

Topics

- Introduction

- Pre-processing

- Methodology

- Analysis

Introduction

- Image informatics have significant influence in medical imaging and includes:
  - Image segmentation
  - Tumour and other pathologies localization
  - Measuring tissue volume
  - Diagnosis and study of anatomical structures, etc.

Methodology

Image enhancement
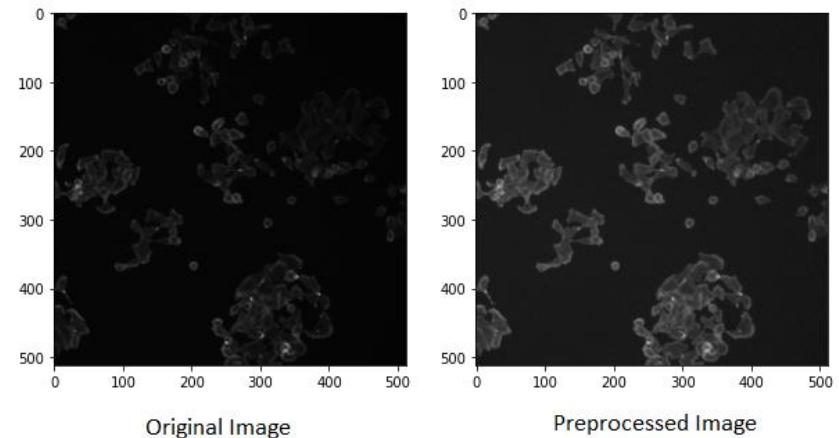
Segmentation

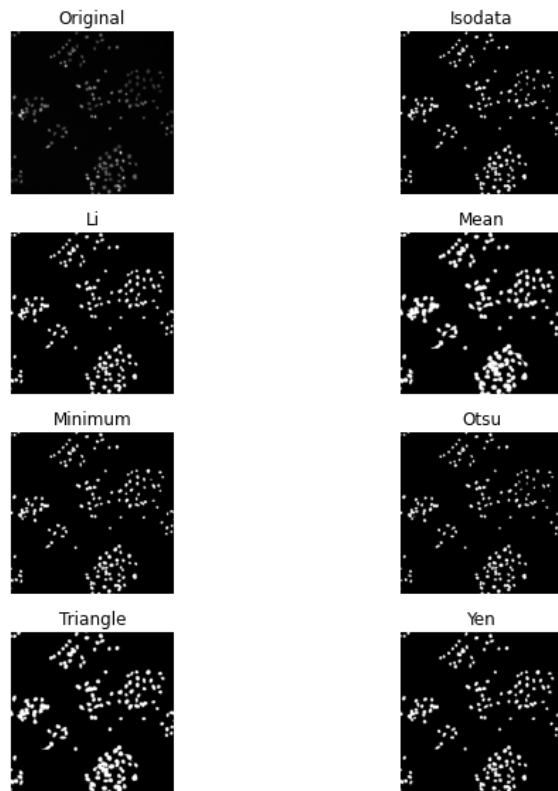Post-processing

Comparative analysis

Pre-processing

Methodologies

- Exponential

- Logarithmic

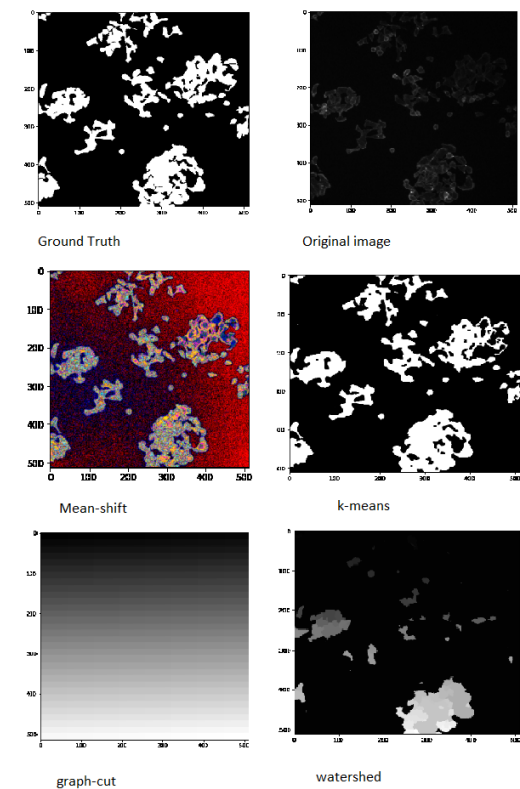- Image normalization (rescale intensity)
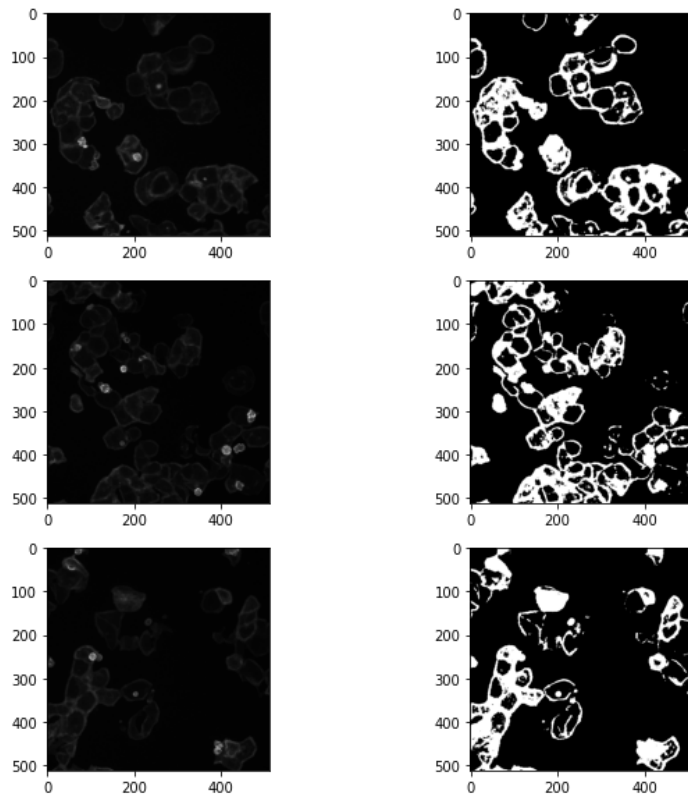
- Gamma adjustment

Clustering

Original Image

Preprocessed Image

Segmentation

Thresholding

Clustering

Post-processing

Failures

Denoising
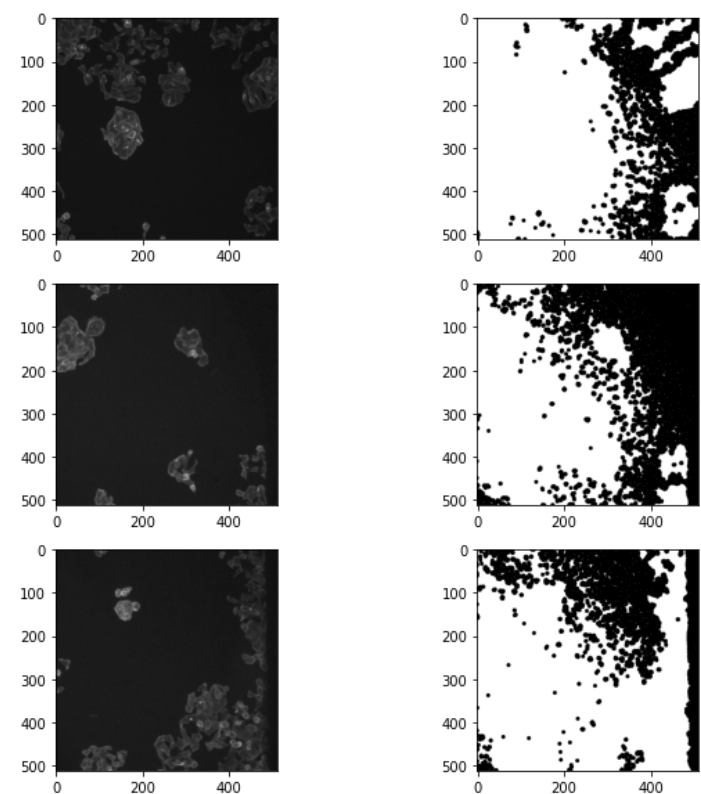
Comparative Analysis

Cell Components	Best Segmentation Technique	Jaccard Score
Cytoplasm	Image enhancement + Mean thresholding	0.86
Nuclei	Image enhancement + Multi Otsu's thresholding	0.88

THANK YOU!