

Project Proposal: Histopathologic Cancer Detection

Project Source

Kaggle

Background

This project would make use of many different aspects of the course that we have applied to the MNIST data set. It also addresses a real-world problem: classifying images into two categories, metastatic tissue present or not (cancerous tissue or not).

Objectives/Goals

- Apply logistic regression to create an algorithm to identify metastatic cancer in small image patches taken from larger digital pathology scans.
- Implement K-Fold Validation and explore parameter space to identify the best parameters for our classification.
- Compare algorithm to PatchCamelyon Dataset, which is where this data set comes from.

Proposed Timeframe

Description of Work	Start Date	End Date
Research on problem/previous approaches	October 31, 2019	
Obtain Data	November 1, 2019	November 5, 2019
Visualize/Explore data	November 5, 2019	November 10, 2019
Mid-project Checklist Due	November 14, 2019	
Begin Model Testing	November 15, 2019	November 20, 2019
Fine-tune Model	November 20, 2019	December 5, 2019
Prepare Poster	December 6, 2019	December 9, 2019
Project Due	December 9, 2019	

Signatures

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10-31-2019

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