A Comparative Study of Machine Learning Algorithms for Cancer and Cell-Type Classification in Histopathology Images.

Course.

# Introduction.

## (1.1) Background and Problem Statement.

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged.

It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

## (1.2) Objectives and Scope.

## (1.3) Methodology.

# Literature Review.

## (2.1) Histopathology Images and Cancer Classification.

## (2.2) Supervised Machine Learning Algorithms.

## (2.3) Previous Studies on CRCHistoPhenotypes Dataset.

# Data Analysis.

## (3.1) Dataset Description and Pre-processing.

## (3.2) Exploratory Data Analysis and Visualization.

# Methodology.

## (4.1) Feature Extraction and Model Selection.

## (4.2) Model Training and Hyperparameter Tuning.

## (4.3) Model Evaluation metrics.

# Results.

## (5.1) Classification of Cancerous and Non-Cancerous Cells.

## (5.2) Classification of Cell Types.

## (5.3) Comparison of Results with Previous Studies.

# Discussion.

## (6.1) Interpretation of Results and Limitations.

## (6.2) Future Work.

# References.

Reference 1.

[Accessed April 25, 2023] from

[Link](https://playground.tensorflow.org/#activation=tanh&batchSize=10&dataset=spiral&regDataset=reg-plane&learningRate=0.03&regularizationRate=0&noise=0&networkShape=7,2&seed=0.38456&showTestData=false&discretize=false&percTrainData=50&x=true&y=true&xTimesY=true&xSquared=false&ySquared=false&cosX=false&sinX=true&cosY=false&sinY=true&collectStats=false&problem=classification&initZero=false&hideText=false)

# Appendices.

## (8.1) Code.

## (8.2) Figures and Tables.