CSE4088 Introduction to Machine Learning

Diagnosis Prediction and Classification of Breast Cancer

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Abstract

Breast cancer is one of the most common cancers among women worldwide, representing the majority of new cancer cases and cancer-related deaths according to global statistics, making it a significant public health problem in today's society.

This analysis aims to observe which features are most helpful in predicting malignant or benign breast cancer and to see general trends that may aid us in model selection and hyperparameter selection. The goal is to classify whether the cancer is benign or malignant. To achieve this we will use machine learning classification methods to fit a function that can predict the class of new input.

Project schedule

- Searching the project subject: By the 5th week, We decided on the project topic that we will work on. We prepare related project plan document until November 9th
- Initial literature search: After the project topic is approved, we will start with the literature search. Check related breast cancer articles and find what kind of Machine Learning algorithms are used.
- Preparing the midterm report: by November 30th, Review the dataset. Implement a basic algorithm based on our research. Prepare a midterm report.
- Preparing final report & final presentation: by January 18th, Implement second and third algorithms, compare all algorithms implemented, Report the final results and prepare a presentation.

List of references

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Telsang, V. A., & Hegde, K. (2020, December). Breast Cancer Prediction Analysis using Machine Learning Algorithms. In *2020 International Conference on Communication, Computing and Industry 4.0 (C2I4)* (pp. 1-5). IEEE.

https://towardsdatascience.com/building-a-simple-machine-learning-model-on-breast-cancer-data-eca4b3b99fa3 Accessed 06 Nov 2021

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