



GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)

Cheeryal (V), Keesara (M), Medchal Dist., Telangana - 501 301

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MINI PROJECT ABSTRACT
IV B.Tech. I SEM CSE - C Section

BATCH NUMBER:C17	Mini Project	Academic Year: 2024-2025
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PROJECT TITLE:

Enhancing Breast Cancer Diagnosis

TEAM MEMBERS:

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ABSTRACT

This study delves into the application of logistic regression as a predictive tool for breast cancer classification. Utilizing the renowned Breast Cancer Wisconsin Dataset, the research embarks on a journey of thorough data exploration and preprocessing to ensure the dataset's integrity and relevance. Through meticulous hyperparameter tuning, the model's efficacy is optimized, enhancing its ability to discern between malignant and benign tumors accurately. Innovation extends to the deployment phase, where Azure ML Pipelines are seamlessly integrated to streamline the model's deployment and management within cloud infrastructures. Additionally, a user-friendly Flask API is developed to facilitate easy access to predictions, catering to the needs of healthcare professionals and stakeholders alike. By intertwining traditional statistical methodologies with modern technological advancements, this research endeavors to propel forward breast cancer diagnosis and treatment strategies. The ultimate goal is to empower healthcare decision-makers with robust tools that pave the way for improved patient outcomes and more informed clinical interventions.

Keywords: Hyperparameter Tuning, Logistic Regression, Flask-API, Azure ML

Objective:

- Develop a logistic regression model using the Breast Cancer Wisconsin Dataset to classify tumors as malignant or benign. Optimize model performance through data exploration, preprocessing, and hyperparameter tuning. Deploy the model via Azure ML Pipelines and a Flask API to improve breast cancer diagnosis and treatment outcomes.

Commercializable: Yes/No: Yes

REFERENCES

- <https://iopscience.iop.org/article/10.1088/1757-899X/1022/1/012071/meta>
- https://www.researchgate.net/publication/343659671_Prediction_of_Breast_Cancer_Comparative_Review_of_Machine_Learning_Techniques_and_Their_Analysis

Date of Submission:27-04-2024

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