

# Plagiarism Declaration

“I affirm that this report is solely my own creation and has not been copied or plagiarized from any other sources, unless proper acknowledgment has been provided. All external references, including literature, online materials, and existing works, have been accurately cited within the report.

Any resemblance to other works is purely coincidental, and I have made every effort to ensure the originality of this work. I recognize that plagiarism is a serious academic violation, and I have maintained the highest standards of academic integrity throughout the development of this project.”

**TEAM ID: GSTN\_435**

## Citations:

1. **Python:**  
Python Software Foundation. (2023). Python Language Reference, version 3.11.9. Available at: <https://www.python.org/>
2. **Pandas:**  
McKinney, W. (2010). pandas: A foundational library for data analysis and statistics. In *Proceedings of the 9th Python in Science Conference*, 2010. Available at: <https://pandas.pydata.org/>
3. **NumPy:**  
Harris, C. R., Millman, K. J., Van Der Walt, S. J., et al. (2020). Array programming with NumPy. *Nature*, 585, 357-362. doi: 10.1038/s41586-020-2649-2
4. **Seaborn:**  
Waskom, M. L. (2021). seaborn: statistical data visualization. *Journal of Open Source Software*, 6(60), 3021. doi: 10.21105/joss.03021
5. **Matplotlib:**  
Hunter, J. D. (2007). Matplotlib: A 2D Graphics Environment. *Computing In Science & Engineering*, 9(3), 90-95. doi: 10.1109/MCSE.2007.55
6. **Scikit-learn:**  
Pedregosa, F., Varoquaux, G., Gramfort, A., et al. (2011). Scikit-learn: Machine Learning in Python. *Journal of Machine Learning Research*, 12, 2825-2830. Available at: <http://scikit-learn.org/>
7. **XGBoost:**  
Chen, T., & Guestrin, C. (2016). XGBoost: A scalable tree boosting system. In *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 785-794. doi: 10.1145/2939672.2939785
8. **LightGBM:**  
Ke, G., Wang, Q., Yang, Q., et al. (2017). LightGBM: A Highly Efficient Gradient Boosting Decision Tree. In *Advances in Neural Information Processing Systems*, 30. Available at: <https://lightgbm.readthedocs.io/>
9. **CatBoost:**  
Dorogush, A. V., Ershov, V., & Gulin, A. (2018). CatBoost: Gradient Boosting with Categorical Features Support. In *Proceedings of the 2018 IEEE International Conference on Data Mining Workshops (ICDMW)*, 2018, 663-670. doi: 10.1109/ICDMW.2018.00145
10. **Dill:**  
L. D. (2021). Dill: Serializing and Deserializing Python Objects. Available at: <https://pypi.org/project/dill/>