Module/framework/package	Algorithm used	When it performs better than Base R or Python equivalent
Base R (stats library)	IRLS functions as the typical procedure for GLMs to determine the best weight values by running the model multiple times.	Small and medium-sized datasets can benefit from this method yet it fails to handle extensive data effectively.
Big Data R (HighPerformanceComputing)	The package employs parallel computing and chunk processing through bigglm and speedglm functions.	This method functions for datasets bigger than memory limits thus surpassing Base R's glm().
Dask ML	The system implements gradient-based optimization together with parallel computing.	Scikit-learn operates at a slower pace than parallel processing of large data by multiple computers.
Spark R (spark.glm)	IRLS optimization runs as a distributed system designed especially for Spark cluster environments.	Large datasets exceeding Base R memory capacity can be managed effectively by using this software. Faster than Python's statsmodels or sklearn in big data scenarios.
Spark MLlib Optimization	The system executes training operations for large-scale GLM through SGD and L-BFGS methodologies.	The platform suits large machine learning applications which require parallel processing although it differs from standard R or Python models.

Scikit-learn	The software utilizes liblinear, lbfgs and saga solvers because these tools optimize GLM efficiency.	The system performs better than Base R for datasets of medium to large sizes particularly in sparse data operations and multi-core CPU applications.