**Project Title:- NeuroGen(A genetic Based Neurological Disorder Predictor)  
  
Objective-** To develop a web application that predicts the risk of neurological disorders(e.g. Alzheimer’s, Parkinson’s,Huntington’s) based on genetic variant input(SNP IDs,gene mutations)

**Key Features-**

**Admin :** Add or update training datasets(CSV files with variant info),train/test ML model, export prediction reports in PDF/CSV

**User Module :**

* Input known SNP ID or mutation name
* option to upload a csv file with multiple gene variants
* Predict likelihood of specific brain-related disorders
* Display confidence/accuracy percentage.
* Save personalized report with date and patient code.

**Input :** Manual SNP ID or mutation entry via web form,CSV file upload with gene variants

**Output:**

1.Associated gene information and biological explanations.

2.Suggested next steps such as further clinical testing or genetic counseling.

3.Disorder risk percentages (e.g., 73% likely Alzheimer's risk).

## ****Datasets & Sources****

**DisGeNET**: Gene-disease association data.

**ClinVar**: Clinical significance of variants.

**GWAS Catalog**: Genetic association studies.

Public or synthetic datasets for training and testing ML models.

## ****Technology Stack:****

## **Frontend- HTML,CSS,Javascript**

## **Backend-Python**

* **Database-SQLite**
* **ML-Scikit-Learn**
* **Visualization-D3.js, chart.js**

The application is designed for educational and research demo purposes