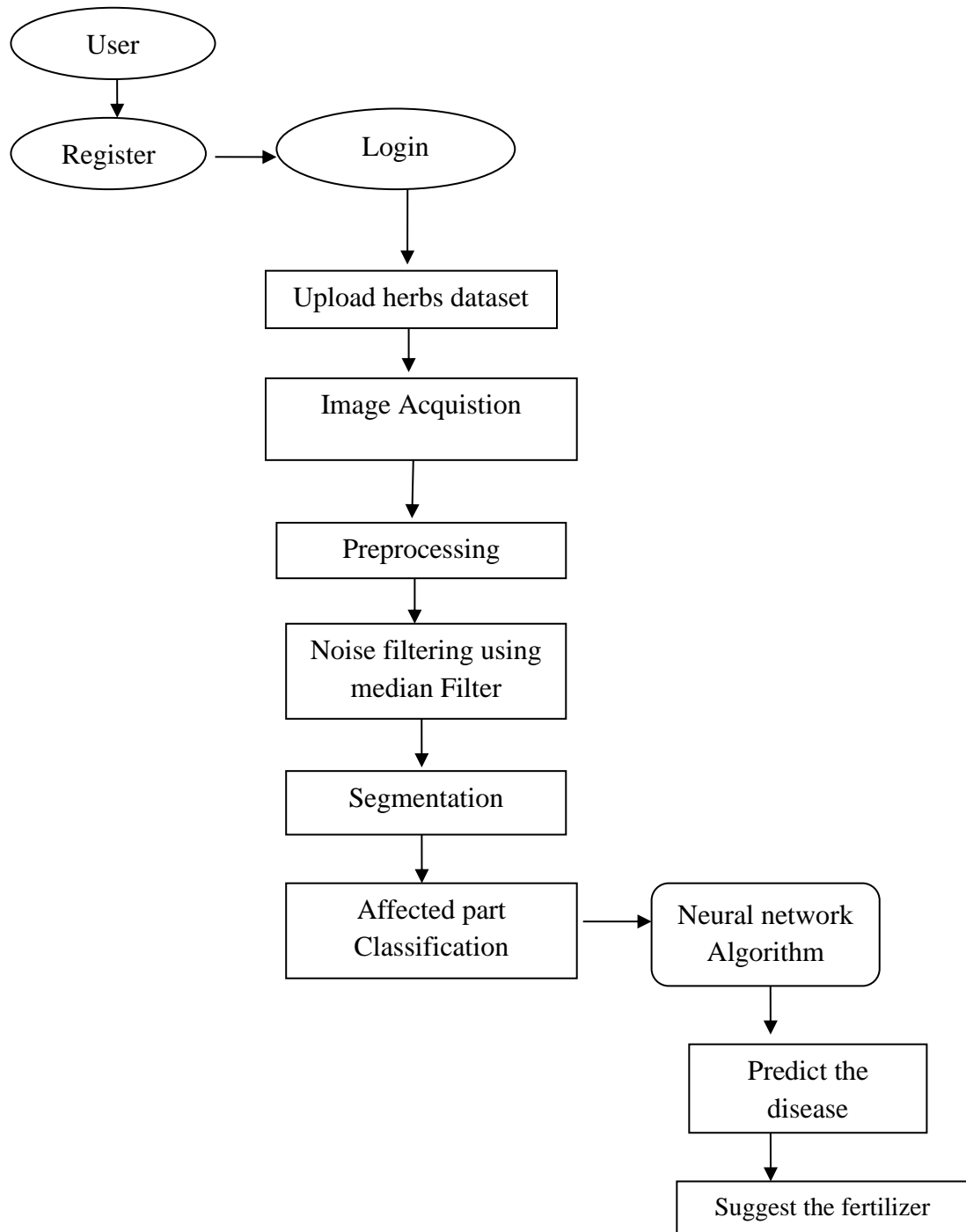# TECNOLOGY ARCHITECTURE

PROJECT TOPIC:FERTILIZERS RECOMMENDATION SYSTEM FOR DISEASE
PREDICTION
TEAM ID: PNT2022TMID08365
NAME:E Praveen(team member)

```
        ┌──────────┐
        │   User   │
        └────┬─────┘
             │
             ▼
    ┌──────────┐        ┌──────────┐
    │ Register │ ─────▶ │  Login   │
    └──────────┘        └────┬─────┘
                             │
                             ▼
                  ┌──────────────────────┐
                  │ Upload herbs dataset │
                  └──────────┬───────────┘
                             │
                             ▼
                  ┌──────────────────────┐
                  │   Image Acquistion   │
                  └──────────┬───────────┘
                             │
                             ▼
                  ┌──────────────────────┐
                  │    Preprocessing     │
                  └──────────┬───────────┘
                             │
                             ▼
                  ┌──────────────────────┐
                  │ Noise filtering using│
                  │    median Filter     │
                  └──────────┬───────────┘
                             │
                             ▼
                  ┌──────────────────────┐
                  │    Segmentation      │
                  └──────────┬───────────┘
                             │
                             ▼
                  ┌──────────────────┐      ┌──────────────────┐
                  │  Affected part   │ ───▶ │  Neural network  │
                  │  Classification  │      │    Algorithm     │
                  └──────────────────┘      └────────┬─────────┘
                                                     │
                                                     ▼
                                            ┌──────────────────┐
                                            │   Predict the    │
                                            │     disease      │
                                            └────────┬─────────┘
                                                     │
                                                     ▼
                                            ┌──────────────────────┐
                                            │ Suggest the fertilizer│
                                            └──────────────────────┘
```

COMPONENTS & TECHNOLOGIES

S.No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	C#.NET
3.	Application Logic-2	Logic for a process in the application	
4.	Application Logic-3	Logic for a process in the application	
5.	Database	Data Type, Configurations etc.	SQL
6.	Cloud Database	Database Service on Cloud	Local host
7.	File Storage	File storage requirements	Local host
8.	External API-1	Purpose of External API used in the application	-
9.	External API-2	Purpose of External API used in the application	-
10.	Deep Learning Model	Purpose of Deep Learning Model	To predict the disease and recommend the fertilizer
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local Server Configuration

APPLICATION CHARACTERISTICS

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Windows Application
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	-
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Able to respond the changes in an application
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	The system must always be functional
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Takes no longer time to response