# CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, Bhilai

## VOCATIONAL TRAINING PRESENTATION

On

### MULTIPLE DISEASE PREDICTION SYSTEM
At
### Edunet Foundation

**Presented By:-**

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**Branch**- CSE(AI)

**Sem.**- 5th

**Course:  B.Tech(Hons.) in CSE(AI)**

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# INTRODUCTION

- AI-powered medical screening application

- Predicts **Diabetes, Heart Disease & Parkinson's**

- Uses pre-trained ML models with medical datasets

- Web application developed using **Streamlit**

- Provides quick and accessible disease risk estimation

# OBJECTIVES

- To develop a unified platform for predicting 3 diseases

- Achieve accuracy range of **75–87%**

- Provide easy user interface through Streamlit

- Perform prediction in real-time

- Maintain scalability and modular architecture

# PROBLEM STATEMENTS

Existing medical diagnosis issues:

- Costly laboratory tests

- Long waiting time for reports

- Limited accessibility in rural areas

- No early screening facility
  **Solution:** Fast, accurate and accessible ML-based risk prediction system

# TECHNOLOGY USED

1. **Programming Language:** Python

2. **Libraries:** NumPy, Pandas, Scikit-Learn

3. **GUI/Deployment Framework:** Streamlit

4. **Model Storage:** Pickle

5. **Tools:** VS Code, Git, GitHub, Google Colab

6. **GithubLink:** https:https://github.com/Kishlay671/
Multiple_Disease_Prediction_System

# DATASETS & ML MODELS

**Datasets Used:(From Kaggle)**

- Diabetes: Pima Indians Dataset

- Heart Disease: Cleveland Dataset

- Parkinson's: UCI Dataset

**Machine Learning Models:**

- SVM (RBF kernel) → Diabetes & Parkinson's

- Logistic Regression → Heart Disease

# SYSTEM ARCHITECTURE & WORKFLOW
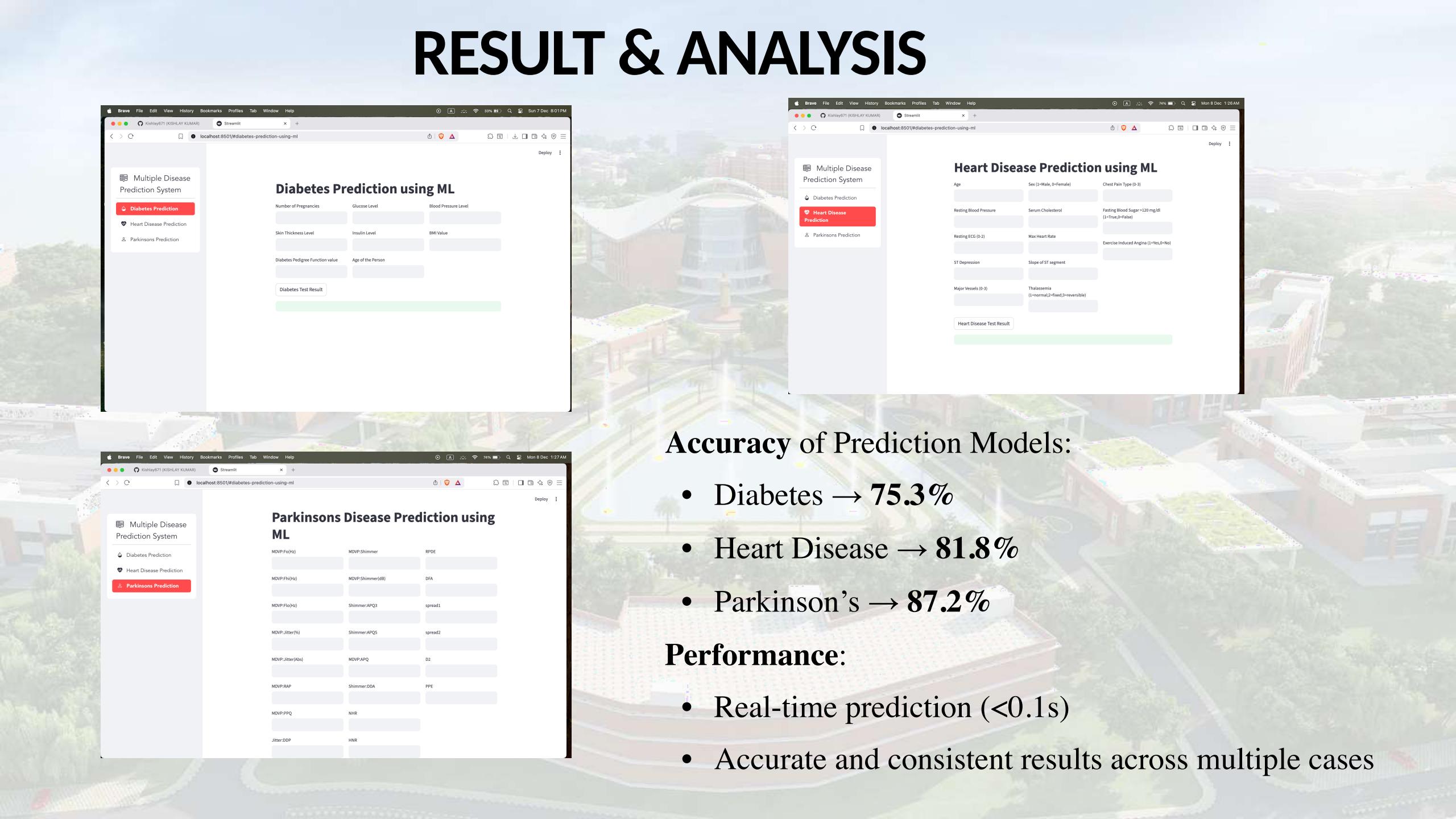
**Architecture:**

- UI Layer (Streamlit)

- Processing Layer (Validation & ML Logic)

- Data Layer (Saved Models)

**Workflow:**

1. User Inputs Data

2. Preprocessing & Validation

3. ML Model Prediction

4. Output Display with Interpretation

# RESULT & ANALYSIS



**Accuracy** of Prediction Models:

- Diabetes → **75.3%**

- Heart Disease → **81.8%**

- Parkinson's → **87.2%**

**Performance**:

- Real-time prediction (<0.1s)

- Accurate and consistent results across multiple cases

# CONCLUSION & FUTURE ENHANCEMENT

**Conclusion:**

- Developed a functional multi-disease prediction web app

- Highly accessible and fast health risk estimation tool

- Reliable prediction with good accuracy

**Future Enhancements:**

- Probability scores & risk visualization

- Add more diseases (Kidney, Liver, Cancer)

- Mobile App UI and cloud database integration

# Thank you!