Organ Donor Prediction

Presented by

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Abstract

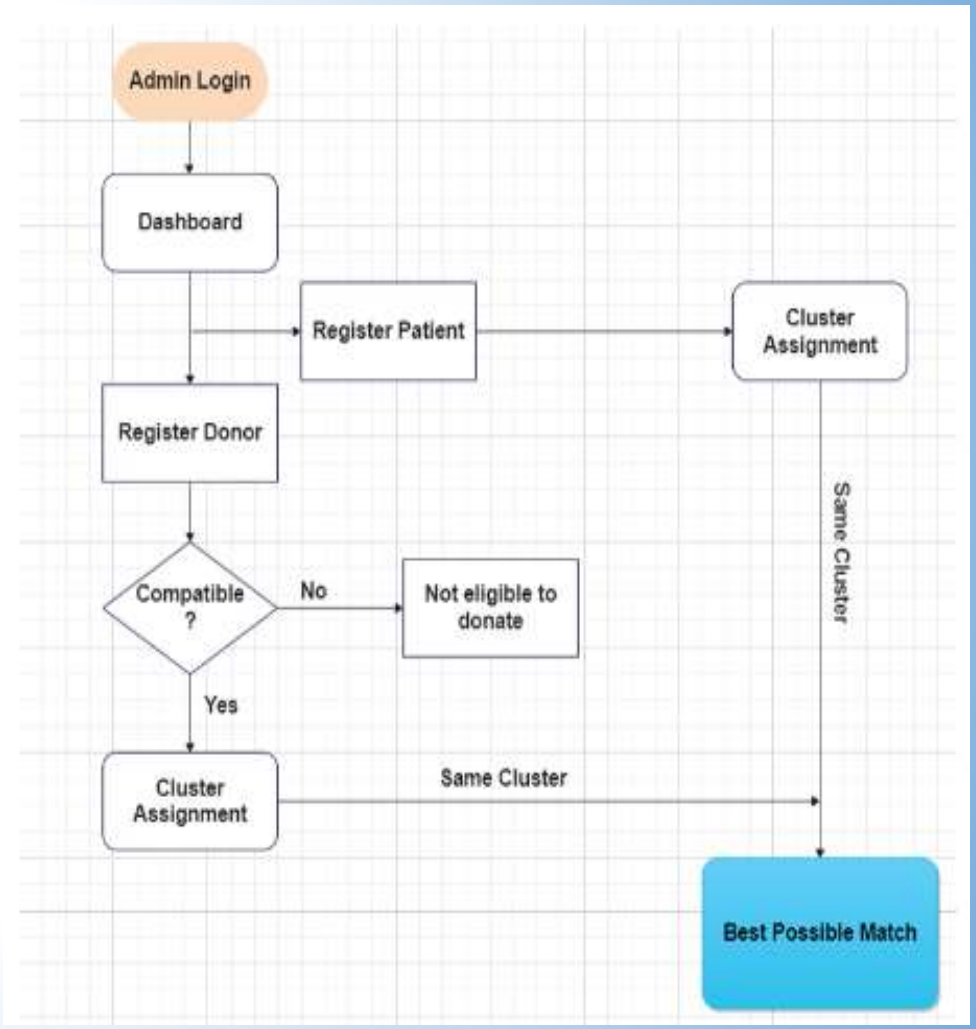
- This project aims to develop a machine learning model that predicts the likelihood of an individual being an organ donor based on various demographic and health-related attributes.
- The goal is to support awareness campaigns and improve organ donation rates by identifying potential donors.
- The system uses real-world data and classification algorithms to generate predictions and insights.

Introduction

- Organ donation is a critical need in modern healthcare systems.
- Many patients die due to the unavailability of organ donors.
- Predictive analytics can help in identifying potential organ donors from public datasets.
- This project applies machine learning for donor classification based on features like age, gender, education, etc.

Existing Systems

- Manual awareness campaigns and surveys.
- Basic statistical tools used by NGOs and hospitals.
- Some health institutions use simple eligibility checklists.
- Lack of personalized donor prediction tools using AI/ML.



Disadvantages of Existing System

- Time-consuming manual processes.
- Limited scalability and reach.
- Inaccurate and generalized prediction methods.
- No real-time data analysis or intelligent prediction.

Proposed System

- A machine learning-based predictive model using classification algorithms (e.g., Random Forest, Logistic Regression).
- Input features: Demographics, lifestyle, education, and health history.
- Output: Binary prediction – Donor / Non-Donor.
- Integrated with a user-friendly interface for visualization.

Advantages of Proposed System

- Fast and accurate prediction using data-driven techniques.
- Scalable and automated model.
- Can be integrated into public health systems and donor registries.
- Enhances awareness strategies by targeting likely donors.

System Requirements

- **Hardware**: Minimum 4 GB RAM, Intel i3 or higher
- **Software**: Python, Jupyter Notebook, Scikit-learn, Pandas, Matplotlib

  Dataset: Donor data from Kaggle or other repositories

Operating System: Windows/Linux

Conclusion

- Organ donor prediction using ML can revolutionize the donor identification process.
- It assists health organizations in data-based decision-making.
- Future enhancements: Include real-time data, mobile app integration, and cross-platform support.
- Contributes toward saving lives and improving healthcare outreach.

THANK YOU