problem statement

Title: Innovative Monitoring System for Tele-ICU

Subtitle: Using Video Processing and Deep Learning

Team Name: Techizz

problem statement

Description

Intensive Care Units (ICUs) require constant monitoring of patients.Manual monitoring is resource-intensive and prone to human error.Need for an automated, real-time monitoring system to improve patient care and efficiency.

Challenges

- Intuitive interface for healthcare providers to view and analyze data.
- Easily scalable to monitor multiple patients simultaneously.

Unique Idea Brief

- **Develop an innovative monitoring system for ICU patients using video processing and deep learning.**
- **Use video feeds to monitor patients continuously and analyze the data in real-time.**
- **Provide alerts and insights to healthcare providers for timely intervention.**

Features Offered

Real-time Monitoring: Continuous monitoring of patients using video feeds.

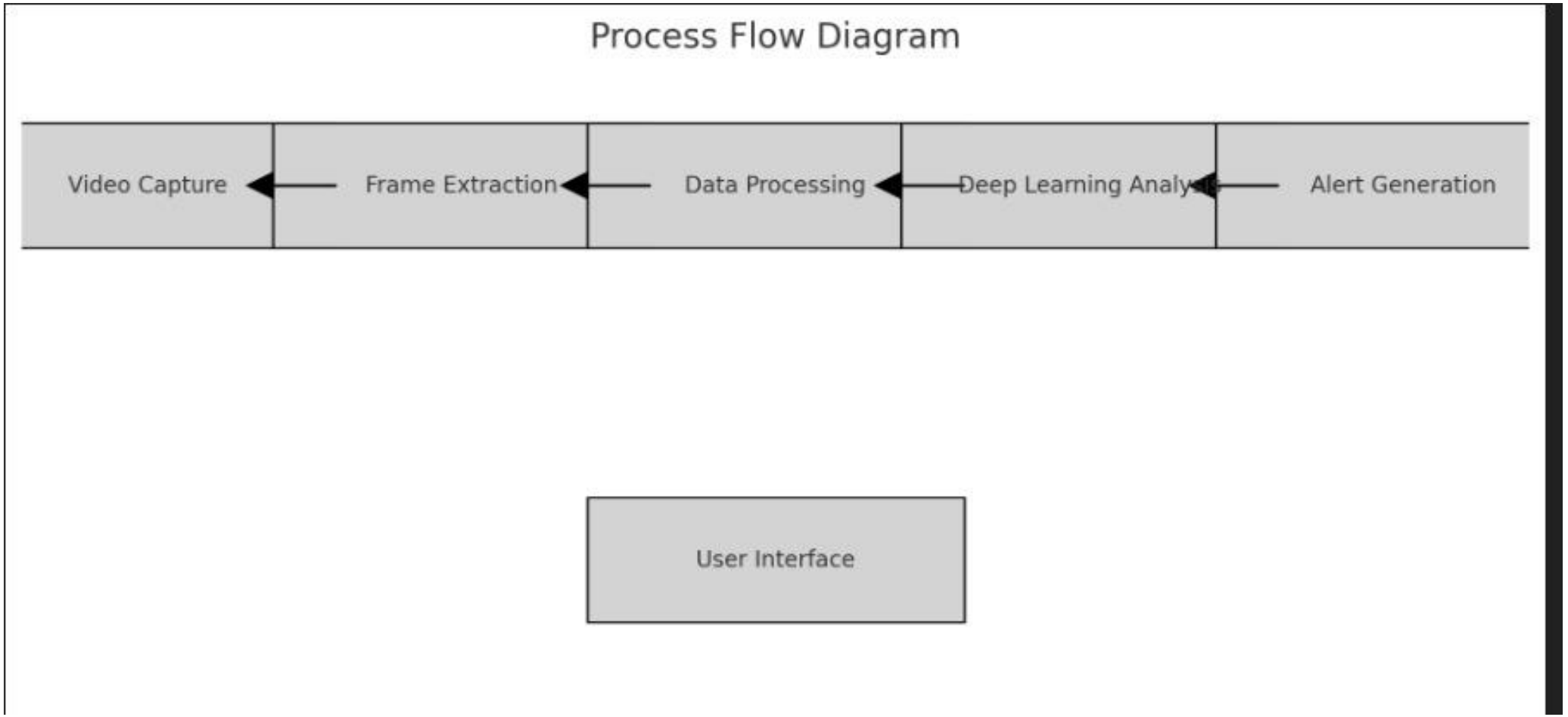
Deep Learning Analysis: Use of deep learning models to analyze video data.

Alerts and Notifications: Automated alerts for critical conditions.

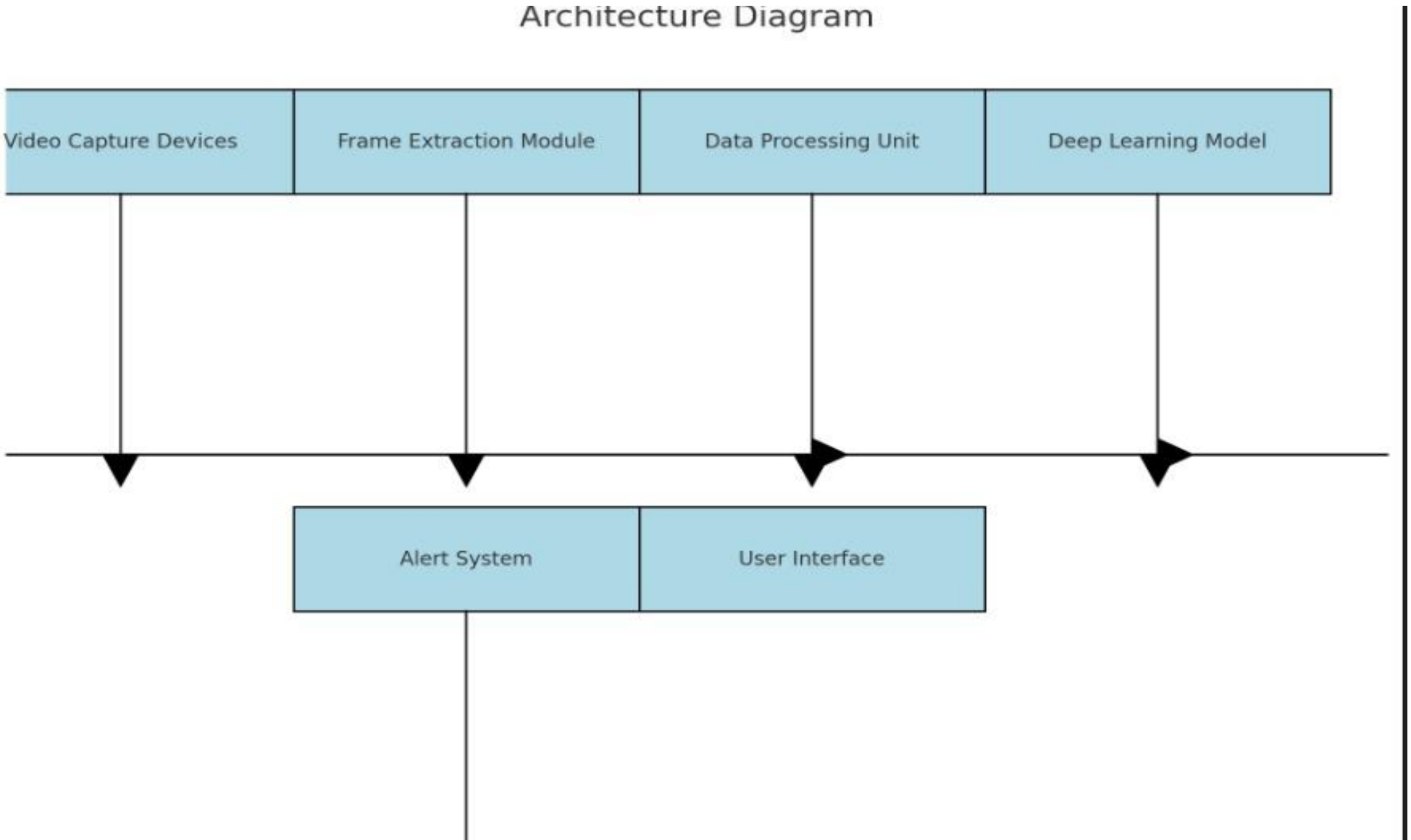
User Interface: Intuitive interface for healthcare providers to view and analyze data.

Scalability: Easily scalable to monitor multiple patients simultaneously.

Processflow



Architecture Diagram



Technologies used

Video Processing: OpenCV, Ffmpeg
Deep Learning: TensorFlow, Keras, PyTorch
Backend: Python,Flask
Frontend: HTML, CSS, JavaScript
Database: PostgreSQL, MongoDB

Deployment: Docker, Kubernetes

Team members and contribution:

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Team Leader : Rudrani Ram Dachawar
Contribution : All the things

Conclusion

The proposed system aims to revolutionize ICU monitoring by leveraging video processing and deep learning.

It provides real-time insights and alerts, ensuring timely intervention and improved patient care.

Future work includes refining the deep learning models, enhancing the user interface, and scaling the system for broader deployment.