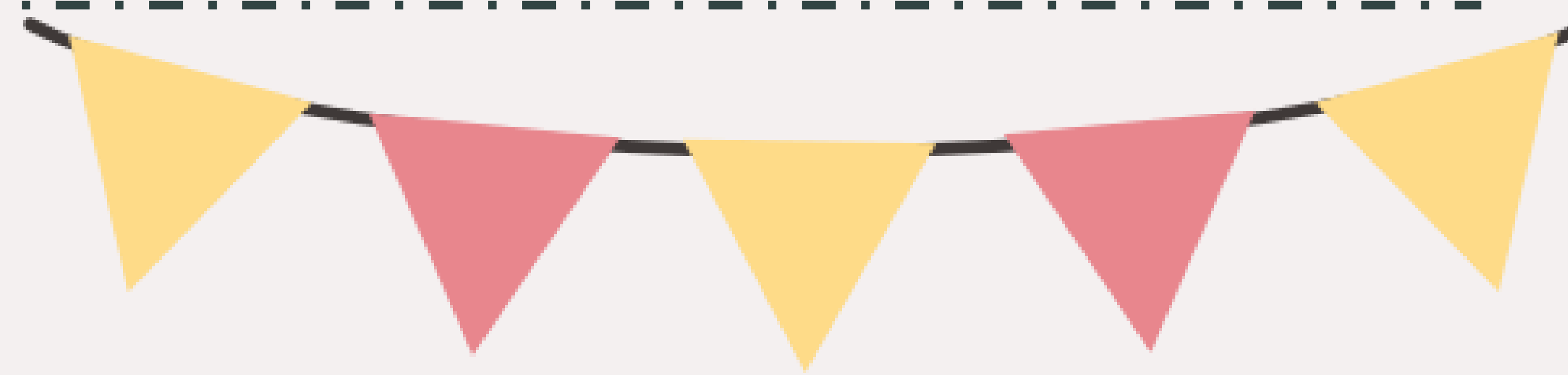


IOT IN REMOTE PATIENT MONITORING: CHALLENGES AND OPPORTUNITIES IN RURAL HEALTHCARE

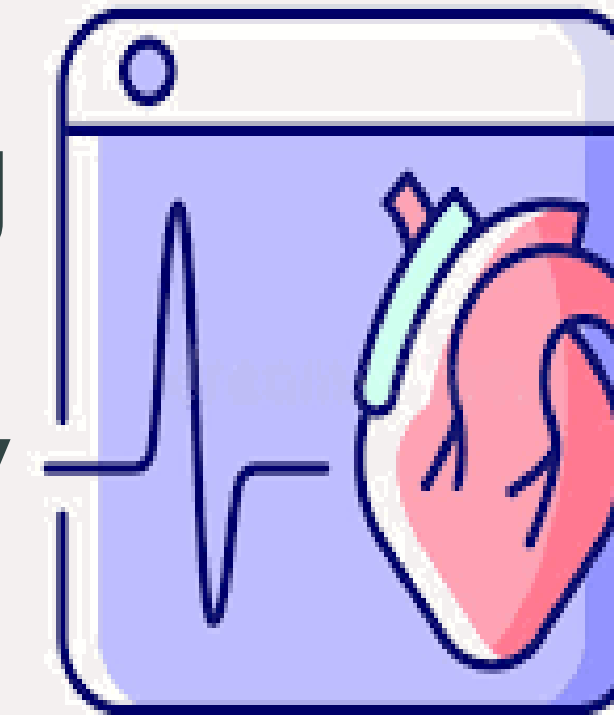


Name of student-----



● Research Question & Anticipated Products

- Explore the applications of Internet of Things (IoT) technology for remote patient monitoring in rural healthcare settings
- Identify the key technical and socio-economic challenges in deploying rural IoT healthcare systems
- Develop solutions to overcome connectivity, power, affordability constraints in remote/low-resource areas
- Anticipated product: End-to-end IoT framework for remote health monitoring tailored for rural environments



● Background Context of the Proposed Research

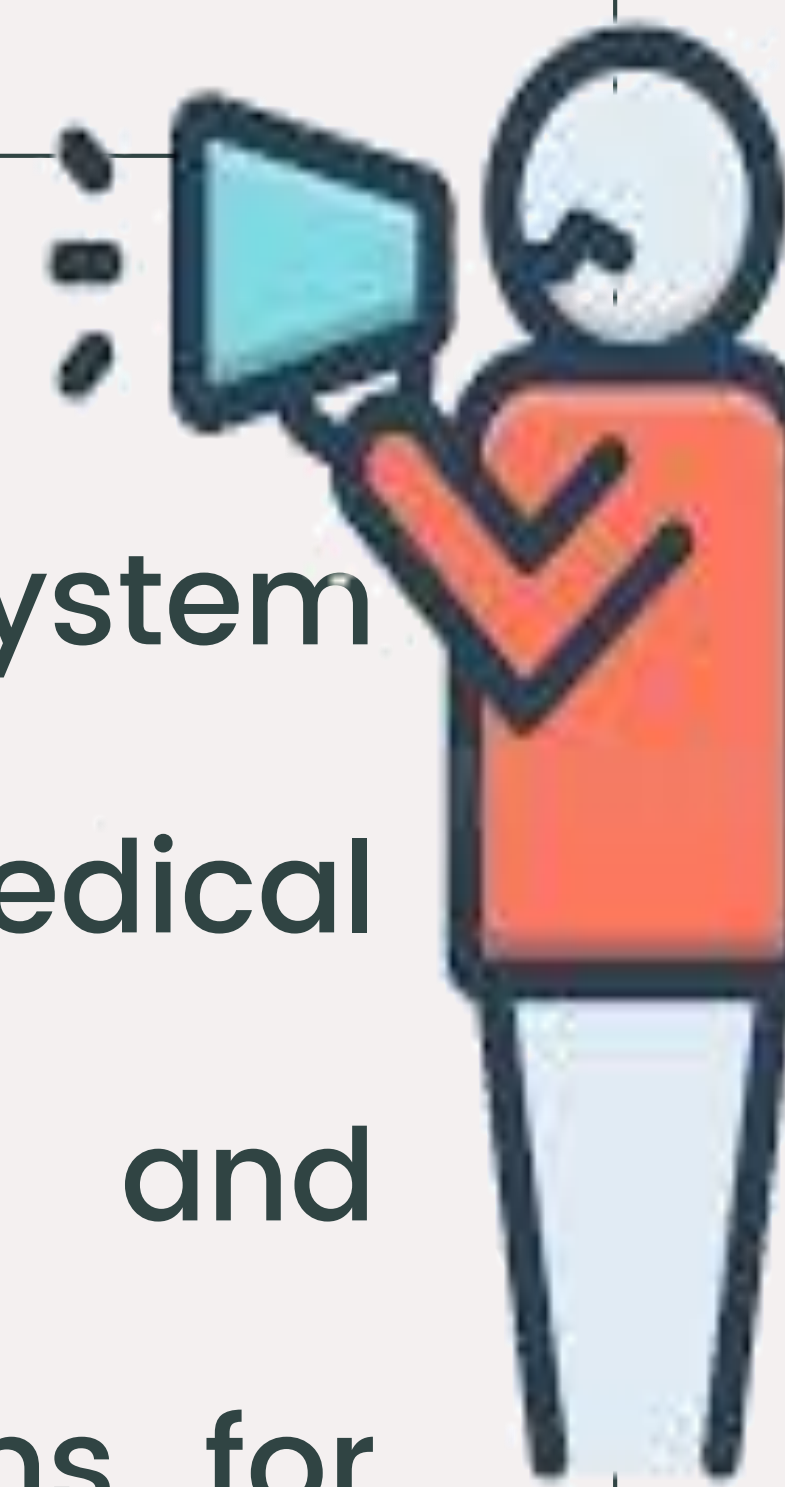
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● Research Methodology

- Requirements analysis through field studies in rural communities and healthcare centers
- IoT sensor/device selection based on affordability, power-efficiency, inter-operability
- Robust edge computing architectures for intermittent connectivity and local processing
- Integration with existing rural healthcare IT systems, mobile apps for data access.

● Evaluation Methodology

- Quantitative: Quality of monitoring data (reliability, frequency), system uptime/availability
- Pilot deployments to assess user experience (patients and medical staff)
- Cost-benefit analysis factoring installation, maintenance and operational expenditure
- Comparative evaluation against urban healthcare IoT systems for gaps.



● Professional, Legal And Ethical Issues

- **Pros:** Improved access to care, chronic disease management, timely intervention.
- **Legal:** Data security and privacy (HIPAA compliance). Clear ownership of patient data is needed.
- **Ethical:** Digital divide - equitable access to technology for rural patients. Importance of user-friendly interfaces for all.

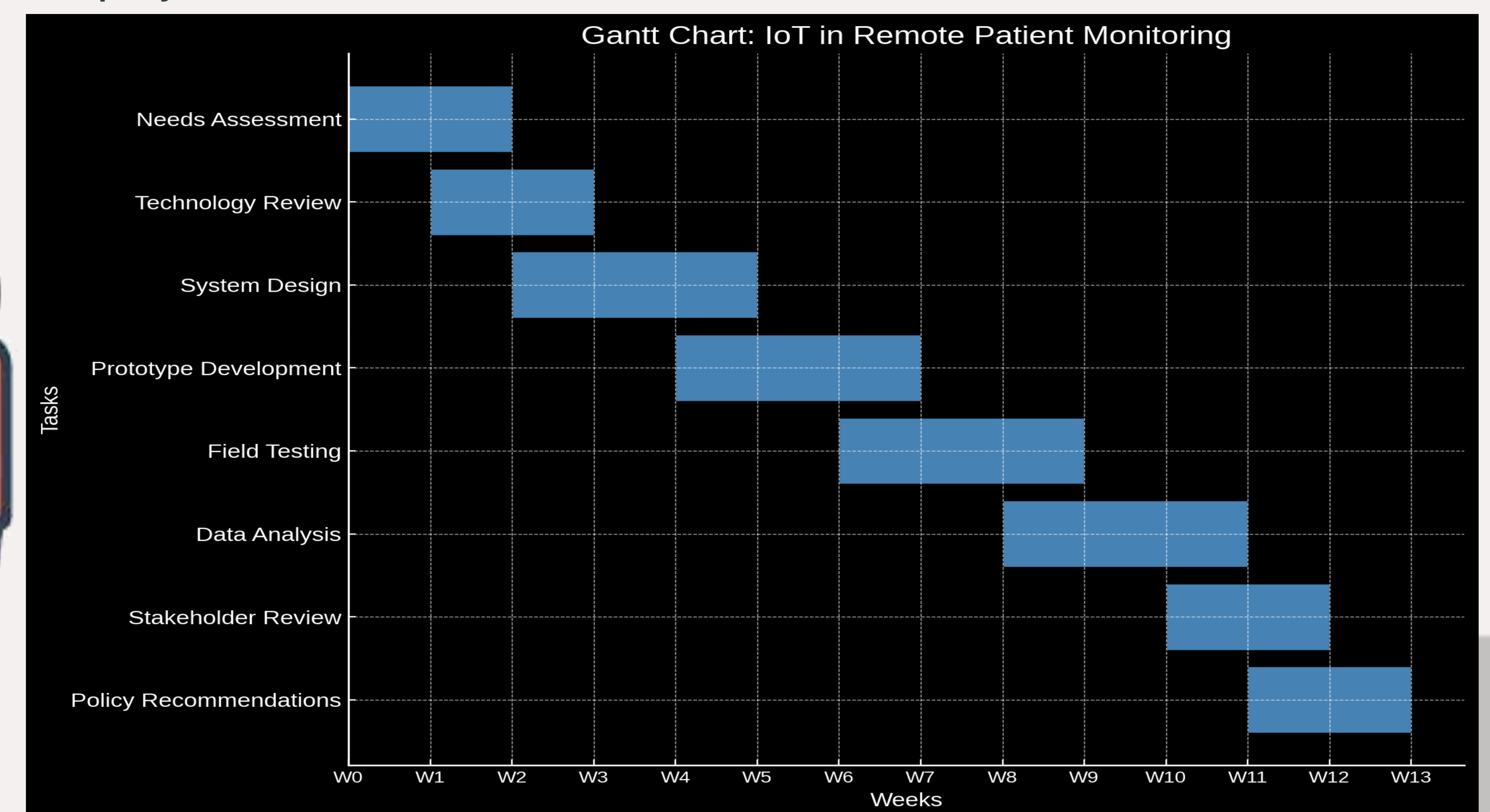


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● Schedule And Dissemination Plans

- The following Gantt chart actually shows the completion idea for this project.



● Conclusion

- Review highlighted potential of IoT for remote patient monitoring in rural healthcare.
- Strict criteria filtered vast literature. Limited access to some publications posed a challenge.
- The review confirms promise but acknowledges challenges like access, security, and scalability.
- Future research could focus on social factors and practical solutions for rural adoption.

