CliniScan Lung - Abnormality Detection on Chest x-rays Using AI

This report outlines the development and evaluation of an AI-powered system for lung abnormality detection on chest x-rays.

Front Matter

i. ACKNOWLEDGEMENT

Placeholder for acknowledgement text.

ii. ABSTRACT

Placeholder for the abstract summarizing the project.

iii. LIST OF FIGURES

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iv. LIST OF TABLES

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v. LIST OF ABBREVIATIONS

Placeholder for a list of abbreviations.

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1. INTRODUCTION

This section provides an overview of the project, including its motivation, objectives, and scope.

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2. LITERATURE REVIEW

This section reviews existing research and methodologies relevant to lung abnormality detection using AI.

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3. SYSTEM ANALYSIS

This section details the requirements and analysis of the proposed system.

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4. SYSTEM DESIGN

This section describes the architectural design of the AI system.

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5. METHODOLOGY AND IMPLEMENTATION

This section outlines the detailed methodology and implementation steps of the project.

5.1 Data Acquisition (VinDr-CXR)

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5.2 Data Preprocessing Pipeline

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5.3 Model Architecture (YOLOv8 & EfficientNet)

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5.4 Training Strategy

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6. RESULTS AND DISCUSSION

This section presents the results obtained from the implemented system and discusses their implications.

6.1 Performance Metrics

Placeholder for performance metrics data and visualizations.

6.2 Qualitative Analysis

Placeholder for qualitative analysis and example outputs.

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7. CONCLUSION AND FUTURE SCOPE

This section concludes the report by summarizing key findings and suggesting future work.

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8. REFERENCES

Placeholder for a list of all references cited in the report.

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9. APPENDIX

Placeholder for supplementary materials, such as additional figures, tables, or code snippets.
