Undergraduate Research Opportunity Programme (UROP) Project Report

Project Title

By

John Doe

Department of Computer Science

School of Computing

National University of Singapore

2024/2025

Undergraduate Research Opportunity Programme (UROP) Project Report

Project Title

By

John Doe

Department of Computer Science

School of Computing

National University of Singapore

2024/2025

Project ID: UXXXXX

Advisor: Professor John Doe

Deliverables:

Report: 1 Volume

Abstract

Your abstract goes here, maximum 200 words.

Subject Descriptors:

D.2.4 Software/Program Verification

D.2.5 Testing and Debugging

Keywords:

Foo, Bar, Baz

Implementation Software and Hardware:

Hardware

Software

Acknowledgements

Your acknowledgements go here.

Contents

List of Figures

List of Tables

Chapter 1

Introduction

Example citation (**lamport_time_1978**).

1.1 Motivation

Chapter 2

Related Work

2.1 Design Overview

```
1 public class HelloWorld {
2     public static void main(String[] args) {
3         // Prints "Hello, World!" to the terminal window.
4         System.out.println("Hello, World!");
5     }
6 }
```

Figure 2.1: Hello World in Java

2.2 Testing

2.3 Problems Encountered

2.4 Limitations

Chapter 3

Materials and Methods

3.1 Dataset

The main dataset used in this project consists of 4369 elbow radiographs in either the lateral or anterior posterior view. (insert origin) Each radiograph is labelled as either positive (untreated fracture and/or dislocation) or negative. The dataset was further split into training, validation, and test sets using a 80/10/10 split as shown in figure 3.1.

In addition, the MURA dataset from Stanford Machine Learning Group was used for pretraining. This dataset consists of 40561 radiographs of 7 different bodyparts: elbow, finger, forearm, hand, humerus, shoulder and wrist. Each image is labelled as either positive (abnormality) or negative (no abnormality).

3.2 Image Processing

3.3 CNN Models

3.4 Vision Language Models

Chapter 4

Evaluation

4.1 Hardware

4.2 Experimental Setup

4.3 Results

ID	Name	Score
1	Alice	88
2	Bob	92
3	Carol	85

Table 4.1: Example of a simple table.

Chapter 5

Challenges

Chapter 6

Conclusion

6.1 Summary

6.2 Future Work

Appendix A - Something

Appendix B - Another Thing