THE TITLE

by

Bryan Thomas D'silva

Submitted in partial fulfillment of the requirements for the degree of Master of Applied Computer Science

at

Dalhousie University Halifax, Nova Scotia November 2017

DALHOUSIE UNIVERSITY

FACULTY OF COMPUTER SCIENCE

The undersigned hereby certify that they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "THE TITLE" by Bryan Thomas D'silva in partial fulfillment of the requirements for the degree of Master of Applied Computer Science.

	Dated: November 1, 2017
Supervisor:	
	D. Prof. Dirk V. Arnold
Readers:	D. Odaprof
	•
	A. External

DALHOUSIE UNIVERSITY

DATE:	November	1.	2017
-------	----------	----	------

AUTHOR: Bryan Thomas D'silva

TITLE: THE TITLE

DEPARTMENT OR SCHOOL: Faculty of Computer Science

DEGREE: M.A.C.Sc. CONVOCATION: May YEAR: 2018

Permission is herewith granted to Dalhousie University to circulate and to have copied for non-commercial purposes, at its discretion, the above title upon the request of individuals or institutions. I understand that my thesis will be electronically available to the public.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

The author attests that permission has been obtained for the use of any copyrighted material appearing in the thesis (other than brief excerpts requiring only proper acknowledgement in scholarly writing), and that all such use is clearly acknowledged.

Signature of A	Author

Table of Contents

Abstra	ct		V
Ackno	wledge	ments	V
Chapte	er 1	Introduction	1
Chapte	er 2	Background	2
2.1	An Ov 2.1.1 2.1.2	Perview of Android Development	
2.2	Camer	ea 2 API	2
2.3	Rende	rScript	2
Chapte	er 3	Current System	3
3.1	Check	Marc	
Chapte	er 4	Motivation and Objective	4
4.1	Storyb	oard	4
4.2	Captu	ring Images using an Autocapture algorithm	4
4.3	Setting	g the correct exposure	4
4.4	Compa	aring the two images	4
Chapte	er 5	Methodology	Ę
Chapte	er 6	Results	6
Chapte	or 7	Conclusion	7

Abstract

This is a test document.

Acknowledgements

Thanks to all the little people who make me look tall.

Introduction

Background

2.1 An Overview of Android Development

2.1.1 About Android

Android is an open source, Linux based operating system. It is a rich application framework used to develop applications for mobile devices, televisions, cars, etc. Initially developed by the Open Handset Alliance, it is now led by Google. Application development in Android is Java-based, however, on May 17, 2017, support for Kotlin programming language is added. Android has a market share of over 99 percent due to its open source capabilities allowing for more customization and a large developer and community outreach.

2.1.2 Application Fundamentals

1. Multi-user Linux System:

Each application is considered as a different user of the system. Android assigns a unique Linux ID to every application, shared only between the application and the system. Since every application runs in isolation, it makes it a safe environment. However, applications are allowed to communicate and share data. For example, the Messenger application and the Contacts application share contacts.

2.2 Camera 2 API

2.3 RenderScript

Current System

3.1 CheckMarc

Motivation and Objective

- 4.1 Storyboard
- 4.2 Capturing Images using an Autocapture algorithm
- 4.3 Setting the correct exposure
- 4.4 Comparing the two images

 ${\bf Methodology}$

Results

Conclusion