KTH Information and
Communication Technology

Performance Optimization of Signal Processing Algorithms for SIMD Architectures

Insert Subtitle here

SHARAN YAGNESWAR

Master's Thesis at School of Electrical Engineering
Supervisor: Carlo Fischione
Examiner: Carlo Fischione

TRITA xxx yyyy-nn

Abstract

This is a skeleton for KTH theses. More documentation regarding the KTH thesis class file can be found in the package documentation.

Abstract

What is foreign title??

Contents

1 Introduction **1**
1.1 Things to mention 1

2 First One **3**
2.1 Preliminaries 3
2.1.1 Remarks 3
2.1.2 Definitions 3
2.2 The Main Theorem 3
2.2.1 Problem Statement 3
2.2.2 The Proof 3

Appendices **3**

A RDF **5**

Chapter 1

Introduction

When it comes to hard real time systems, the execution time of the program plays an important role in determining the stability and failure rate of the system. This is because real time systems have hard deadlines, which they have to meet in order to meet the required functionality. Furthermore, precise determination of these deadlines play a crucial role during the design phase of the system. Software running in these systems must be written in such a way that it meets these deadlines.

1.1 Things to mention

- something about performance optimization and why it is needed in dsp
- start with vectorization and what it does, simd and mimd
- what a real time system is and how dsp plays a role
- Some arm Architecture stuff, pipeline, fpu, neon, cache
- some neon stuff
- some stuff about the problem statement and possible solutions
- some stuff about the approach i took in the thesis
- some stuff about the summary of the following sections
- some things about

Chapter 2

First One

2.1 Preliminaries

2.1.1 Remarks

2.1.2 Definitions

2.2 The Main Theorem

2.2.1 Problem Statement

2.2.2 The Proof

Appendix A

RDF

And here is a figure

Figure A.1. Several statements describing the same resource.

that we refer to here: A.1