## NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY



SPEECH PROCESSING AND SYNTHESIS USING HIDDEN MARKOV MODELS

> By kernan muzheri (N007 4534C)

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS OF THE MASTER OF SCIENCE DEGREE IN COMPUTER SCIENCE

2011

## Abstract

This dissertation is a study of Speech Processing and Synthesis using Hidden Markov Models. We implement these models in speech recognition and synthesis for English and Shona languages. We present a speech processor and recogniser design and implementation that is highly modularised and adaptable to any top layer application that is JSAPI compliant. Finally, we successfully build the speech and text corpora for both English and Shona.