# Improving usability and accessibility of Fuzzy Logic software systems with a web-based approach

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I hereby declare that this dissertation is all my own work, except as indicated in the text:

Signature _____

Date _____/_____/_____

**Abstract**

Abstract giving a short overview of the work in your project

Ensure to mention:

1. Further work with Type 2
2. Extend with other systems (Joe's dissertation)
3. Changes that Luke makes
4. Friendly errors
5. Things from presentation
6. KeyPress Javascript library
7. Help system is dedicated, but offers links to other, helpful, external resources

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# 1 Introduction

Fuzzy logic is an ever expanding field, and

In this dissertation, I will be focusing on creating and online fuzzy logic inferencing and visualisation system.

Producing an online fuzzy set manipulation system may, at first, seem relatively trivial, but this project will focus specifically on usability and accessibility of the system, so that it is as easy to use as possible, by novices and experts alike.

There are already many different software systems available for working with fuzzy sets, but whilst researching these systems as part of my second year group project, I found that the majority of available systems suffer from one of two key flaws: difficulty of use, or difficulty of access - and thus the motivation for this project was born.

Whilst working on my second year group project, I had to spend a considerable amount of time researching

setting out the aims and objectives of your project

1. a statement of the importance of the subject
   fuzzy logic is becoming ever more important. important not to reserve it just for experts
2. mention of previous work on the subject
   matlab, fuzzy toolkituon, juzzy, xfuzzy ...
3. a justification for dealing with the subject
   researching fuzzy logic systems last year, i discovered that they are either hard to use or hard to access/install/download
4. a statement of your objectives
   to produce an online fuzzy logic system that allows for the inferencing and visualisation of fuzzy sets, whilst being as easy to use and access as possible.
5. a statement of the limitations of the work
   type 1 fuzzy logic
6. a mention of some of the differing viewpoints on the subject
   could be argued that it doesn't need to be accessible, because only experts will use it. but i am attempting to open fuzzy logic up, as it's influence in the western world is much lesser than it is in the eastern.
7. a definition of the topic being discussed

# 2 Motivation

Motivation explaining the problem being solved

# 3 System Specification

Description of the work explaining what your project is meant to achieve, how it is meant to function, perhaps even a functional specification

## 3.1 Functional Requirements

## 3.2 Non-Functional Requirements

# 4 Existing Systems

Related work explaining what your project does that is new or is better than existing work in the same field

## 5 Designs

Design containing a comprehensive description of the design chosen, how it addresses the problem, and why it is designed the way it is

## 6 Software Implementation

Implementation containing a comprehensive description of the implementation of your software, including the language(s) and platform chosen, problems encountered, any changes made to the design as a result of the implementation, etc

## 7 Evaluation

Evaluation explaining how your software was tested (using different datasets or in different environments), statistical evaluation of performance, results of user evaluation questionnaires, etc.

## 8 Summary and Further Work

Summary and further work including a personal reflection on your experience of the project and a critical appraisal of how the project went

[1]

## References

[1] Shalini S Singh and NC Chauhan. K-means v/s k-medoids: A comparative study. In *National Conference on Recent Trends in Engineering & Technology,(13-14 May 2011)*, 2011.

# A test