

SUBJECT GROUP COMPUTER SCIENCE AND INFORMATION SYSTEMS

Research Proposal for Honours project

The student and the supervisor must consult the *Manual for Postgraduate Studies* prior to writing the research proposal. The *Manual for Postgraduate Studies* explains in detail what is expected at each of the subheadings below. The proposal should not be longer than 5 pages.

The Subject Group requires that the research proposal will be submitted through the use of this form and in the format below. Please complete using a computer.

1 Student initials, surname and student number

Initials

A

Surname

Muhammad

Student number

33016763

2 Degree for which student is registered

Bachelor of Science Honours in
Computer Science and Information
Technology

3 Name of supervisor

Initials and surname

H Kruger

4 Proposed title

Title (preferably not more than 12 words)

A cellular automata approach to model informal settlement growth

5 Problem statement and substantiation

Provide the theme and link with gaps in the literature and recent research in the area. Indicate the research question, its actuality and how the research will endeavour to answer the question.

6 Research aims and objectives

Provide the different general as well as the specific aspects which will form part of the research.

Aims are to create a sound mathematical and statistical model thereafter apply the model to Life to predict growth of informal settlements.

Objectives are firstly to get access to the relevant maps and datasets. If this is not achievable other methods such as creating it ourselves will be employed. Thereafter creating and applying the model to the maps to predict growth. Lastly compare accuracy.

7 Basic hypothesis (where applicable)

N/A

8 Method of investigation

8.1 Literature study

Provide an indication only of which literature will be used in the study with a few key references. A summary of the literature is not required here.

8.2 Methods of investigation

The proposed design, data acquisition, procedures, data processing, funding sources (but not a budget), mathematical methods, computer methods, etc.

9 Provisional chapter division

Here it should be clear that there was proper reflection on the appearance of the final product (mini dissertation). Provide provisional titles of the various chapters, with a brief outline of the planned content of each.

1. Introduction
2. Literature Review
3. Artefact Design
4. Discussion
5. Conclusion

10 Literature references

Provide complete references to the literature referenced to in this proposal only.



Student

Supervisor

18 April 2021

Date