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RESEARCH METHODOLOGY
REPORT

ON

TRAFFIC INFORMATION AND SHORTEST ROUTES IN KAMPALA UGANDA

1 Introduction

1.1 Problem Statement

In Uganda, like in any developing countries in Africa, the poor state of transport infrastructure is a looming problem which often leads to accidents and high cost of doing business. With the increase in the volume of private cars, taxis and human traffic and predominantly narrow roads, coupled with the limited space, there is a sharp increase in accidents and other fatal incidents which is a big threat to life. A 2014 incident report from police in Uganda, that covers a five-year period(2008-2012) on injury and fatality trends, indicates that the number of fatalities on Ugandan roads as a result of road accidents was at 5,145 from 3,951 across the same period.

1.2 Objectives

1.2.1 Main Objective

To develop a system that gathers information about traffic and suggests the traffic free and shortest route one can use from his or her current location to the destination.

1.2.2 Specific Objectives

1. To collect data on the traffic,routes and current existing systems
2. To analyze the data collected and generate requirements
3. To design and implement the proposed system
4. To test and validate the system

2 Methodology

- To achieve the first objective. I intend to use OpenDataKit to collect data about traffic and routes in kampala and after carry-out literature review on related systems.
- Secondly, I intend to use ODK (openDataKit) Aggregate server to export collected data into excel and spreadsheets for analysis. Models such as maps simple graphs,Data Flow Diagrams (DFD) will be used to document and visual the true and real requirements for the system being developed.
- Thirdly, I shall use ERD and UML diagrams to design the system. I intend to use machine learning and python for implementing the system.
- Lastly, I shall test the system in order to correct errors or remove defects that will have arose through compiling and running on the development platforms.

References