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References

DEVELOPMENT OF AN EFFICIENT PUBLIC TRANSPORT SEARCH PORTAL FOR GHANA

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OVERVIEW

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PROBLEM DEFINITION

Problem

- ★ Road transport is the major means of transportation in Ghana (AIDOO et al., 2013)
- ★ Over 95% of all passenger and freight traffic and about 97% of all passenger miles in Ghana is by road (UNESCO, 2010)
- ★ Privately owned or corporate taxis, *tro tros* (shared minivans), buses commuting between major cities (Abane, 2011)
- ★ Difficulty in finding terminals specific location and detailed information
- ★ Fares and stations keep changing

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PROBLEM DEFINITION (CONT'D)

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Figure: Kaneshie Transport Terminal



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This project seeks to:

- ★ To develop a web application that provides detailed information about transport terminals:
 - * To mitigate the difficulty in finding transport terminals and improve trip planning
 - * To provide reusable data and a cross platform system by implementing a geospatial database containing exact location of transport terminals



METHODOLOGY

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Methods used for this project:

- ★ Review of relevant and related literature
- ★ Developing a query system for routes
- ★ Developing a portable geospatial database
- ★ Field survey to collect information on some transport terminals
- ★ Crowd sourcing terminal information



TOOLS USED

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The tools used for this project are:

- ★ Python
- ★ Django
- ★ Material Kit
- ★ PostgreSQL
- ★ QGIS
- ★ Leaflet and OpenStreetMap
- ★ GPS receiver and Smartphone



RESULTS AND DISCUSSIONS

The results and discussions:

- ★ User gets routes based on destination and departure searched
- ★ A user can access all available operators and view detailed information on each station
- ★ User can compare fares visually
- ★ A user is able to access station location in external platform
- ★ Groups for managing staff privileges
- ★ Detailed history of changes available in administration dashboard



ANALYSIS OF EXISTING SYSTEMS

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Diagrams

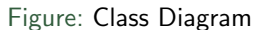
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Although there exist systems with similar functionalities as this project, most of these existing systems:

- ★ Do not suit and have focus on the Ghanaian transport system
- ★ Lack fare information
- ★ Are less reliable; E.g. Word of mouth
- ★ Are not frequently updated





- ★ Will improve trip planning and easy access to information only available within terminals to traveler hence saving time
- ★ Should be adopted by Ghana Tourism Authority to help tourists find their way around Ghana transport network



CONCLUSIONS AND RECOMMENDATIONS

It can be concluded that this system:

- ★ Will improve trip planning and easy access to information only available within terminals to traveler hence saving time
- ★ Should be adopted by Ghana Tourism Authority to help tourists find their way around Ghana transport network

I would recommend that:

- ★ Users should be able to book seats from the platform and also support voice input for the visually impaired
- ★ The system could get users current location and find nearest possible departure stations for their routes

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THANK YOU