Zambia School Mapping Project

**Problem Description**

There is need to map schools in Zambia in real time because most of the infrastructure is not mapped and with limited internet connection. This will help both UNCIEF and the government to deliver resources, during floods and drought or any other disasters and also to have an equal distribution of resources. Sometimes these schools are used as centers for elections polling stations, centers for disaster and health centers.

**Project Significance**

* To provide unicef and Zambia with a real time presence of every school in Zambia.
* It will also assist the Zambian government in mapping polling stations because they use schools to vote.
* Resources distribution by all donors will be easier especially during disasters such as floods and drought.

**Project Challenge**

After visiting the Ministry of Education Headquarters in Lusaka, we discovered that they did not have any data concerning the location of schools in Zambia (coordinate points). This makes it very difficult for us to use AI or Machine Learning approaches like Open-Street Maps to directly identifying schools in Zambia based on existing data. Furthermore, most streets are not labeled and no digital maps exist.

**Proposed Solution**

This project will work on mapping Zambian schools in real-time using geo data, satellite imagery, Deep learning and verifying this information with ground truth information from the government about every location of schools in Zambia.

**Proposed Users**

* Unicef and other donor agencies
* electoral commission of Zambia especially during elections.
* Government of Zambia, especially the Geological survey department, Ministry of Health and Education

Motivation for the Project

This project was motivated by the school mapping project in Cambodia which was done through UNICEF.

The following Images shows a sample of schools from three different towns; Lusaka, Mongu and Kabwe. Out of the the 8500 plus schools in Zambia, less than 1% or none can be tracked or identified easily at the moment because of poor street labels, none existence of coordinate points or visible landmarks like School grounds. The situation is made worse by a lack of updated digital maps.

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| Munali Secondary School in Lusaka Province | Senanga Girls and Boys Secondary schools in Western Province |
| Broadway Basic School in Central Province | Woodlands A Basic School in Lusaka province |