Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Information Technology

Bachelor Thesis

Open Data in Nepal: An Application Prototype Development

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Summary

This thesis attempts to explore and provide an overview of Open Data in the Nepal. Mainly focused on the open government data of Nepal based on Open Nepal.net and Nepal.gov.net.

Furthermore, concept of open data and its principles including its definition will describe in theoretical part of the thesis. In this high-tech age, open data is very likely to increase with the rise of internet, because purpose of open data is changing relation between citizen and government.

In the practical part, thesis starts with current state of open data in Nepal. The thesis continues through a design of an application prototype NPL OPEN APP.

Application development process, CATWOE analysis, FURPS+ and Use Case Diagram are purposes according to the NPL OPEN APP.

At the end, the Result and Discussion part will explain about open government partnership.

Difficulties and barriers are studied through SWOT analysis that appeared while developing the application.

Brief Conclusion and Recommendation are provided at end of the thesis.

Keywords:
Nepal, Open data, Data set, Reuse, Redistribution Data, paper prototype, development, data collection, analysis.

Extended Abstract

This thesis is focused on open data published by government to the public use in Nepal based on Nepal.gov.np and help of Open Nepal.Net. The fields studied are uses of open data, barriers and difficulties for using open data, its development processes, government rules and regulation for open data. This thesis mainly focuses on Nepali citizen, health and education, increase employment rate, country development and foreign aid.

Research and study about the thesis might be helpful for government of Nepal and some private NGOs, INGOs, and public or anyone who can find it useful.

In practical part of the thesis, a prototype of NPL OPEN APP is visualised using the online prototype tool named as **just mind pro,** and its design and development process provides using standard software design tools based on software development process.

Objectives

The main goal of the thesis is to design and develop an application prototype using open data, which will utilize open data to provide useful information to the General Public and business personalities.

Partial goals of the thesis are as follows:

- Conduct an analysis of the current state of open data in Nepal and study and research about its opportunities and barriers.
- Design an application prototype based on open data in Nepal.
- Evaluating the developed application and formulating conclusion and recommendation.

Methodology

Methodology of the thesis starts with the introduction of open data including its objects and research questions. Literature review is done with explanation on open data principles, their development, uses and challenges, drawing from the latest literature sources. The practical application is done by using prototyping and software engineering methods and tools. At the end, evaluation, discussion and conclusion are provided.

Conclusion

This study focused on design and development of an application prototype using open data sets from the open government data of Nepal. The developed application is very applicable and helpful for the users to receive information in a more understandable way. Users have the option to interact with the data through the application where he can find data charts and tables with statistical analysis and does not require advanced knowledge about latest technology and statistics. To achieve the partial goal, there was a brief analysis from public sector such as: OpenNepal.Net, Nepal.GOV.NP, www.nepalimmigration.gov.np etc.

Furthermore, concept about open data and how they can be useful in different areas was explained through practical part and shows how it benefits the application in the Nepal and other developing countries. Application development process and its advantage is also described through prototype.

Moreover, how this application prototype was developed and how the download data sets were used, were clarified through a full prototype view of application and processes from the

designing and developing system called "*NPL OPEN APP*". It also provides meaningful information by selecting the latest published data.

"NPP OPEN APP" application supports all kind of devices such as desktop, tablets, kindle and the mobile phones. The application was designed to response for all kind of screens.

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