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Sub Program 6: ICT and GIS for Sustainable Rural Development

Data Mining in Health care: HIV Patient Monitoring

Patient monitoring during treatment is of utmost importance. The degree of patient monitoring may vary depending on the medical condition the patient has been diagnosed with at the time. For the cases of chronic illness, for instance AIDS a constant, absolute and accurate degree of patient monitoring is required. In Uganda, patient monitoring is a tedious task not only because of the manual techniques of patient monitoring but also because of the lack of incorporation of the broad advances in information systems. While the large quantities of data involved and the mode of storage of the data makes manual analysis inefficient the data can still be organized into databases that can be used to discover new knowledge from the past data using data mining techniques. This is especially important in countries like Uganda, which are heavily affected by chronic illness such as AIDS where medical cures are still being sort and all new knowledge about the disease are welcome. This research aims to develop the framework for incorporating data mining in monitoring health care of AIDS patients in Uganda. It shall involve an assessment of the status of information systems in health care in Uganda and the identification of the constraints to incorporating data mining in AIDS patients monitoring. It will further involve the development, simulation and testing of a health care data warehouse for Uganda specifically targeting AIDS patients.

The research will ensure that the huge quantities of information that is generated from the daily activities during patient care are not just laid to rest but used in the endless endeavor of knowledge discovery through data mining by using ICTs. This will assist in putting the health care givers in a more informed position when monitoring or administering patient treatment, minimizing incidences of human error in treatment. It will further assist in forecasting and predicting patient medical treatment direction and relapses in patient condition. By studying the existing data in the data warehouses researchers shall be able to generate new knowledge through analysis of different patterns of data.