

UNIVERSITY OF STIRLING

MASTERS THESIS

Modelling Relationships in a Social Care Setting

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Abstract

Department of Computing Science and Mathematics

Masters of Science in Big Data

Modelling Relationships in a Social Care Setting

by Amy SAMPAYS

In recent years the era of Big Data has emerged and with it numerous technologies that provide data storage methods in many forms. The power, size and affordability of data storage and computing is increasing . This has led to vast amounts of complex, dynamic and heterogeneous data being collected across many different fields. Relational database management systems are limited to structured data however in the real world data is commonly unstructured and somewhat unpredictable. NoSQL storage methods provide ways to solve the problems RDMS cannot and the ability to make sense of and understand Big Data. This thesis is an investigative project that explores different NoSQL solutions to the modelling of highly connected data. The specification of the system is based on the requirements of the OLM group, which needed a system for storing and querying diverse social care data about children and their relationships. Fundamentally the project examines a particular type of NoSQL graph database with a user friendly web based interface and how it can be applied to the particular problem domain.