

# Standards based Personal Knowledge Graphs

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Bachelor's Thesis – 15. July, 2022  
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## **Abstract**

Knowledge graphs have been leveraged in enterprise and open data for more than a decade, but for personal use, they are just emerging. Most of the tools for personal knowledge graphs are based on proprietary tech and data formats. This Paper explores how data-centric PKGs can be modeled using Semantic Web Standards and how to create usability focused Interfaces for them.

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# 1 Introduction

Here you should put a short introduction to your chapter. What is covered? In how much detail? Imagine you were coming back to this in 10 years time and wanted to find that one key equation, this part of the chapter should orient the reader to help find that information.

## 1.1 Overview

## 1.2 Vision

## 1.3 Contributions

## 1.4 Outline



## 2 Preliminaries

### 2.1 Related Concepts and Technologies

### 2.2 Related Work

## **3 Modeling PKGs with SWS**

### **3.1 The Structural Framework**

### **3.2 Requirements of a PKG Graph Model**

### **3.3 Types and Syntax**

### **3.4 The different Data Layers**

### **3.5 CRUD operations and effects**

### **3.6 Advanced Semantics with OWL**

# 4 Semantic Markdown

## 4.1 Markdown Outliner in RDF

## 4.2 Advanced Markdown Flavors

## 4.3 A Semantic Markdown extension

### 4.3.1 Advanced Semantics (Owl etc)

# 5 PKG Tools

## 5.1 Requirements for a PKG App

## 5.2 Analysis of the Software Landscape

## 5.3 Applying the Model

## 5.4 Abstracting away Technical Details of Semantic Web Technologies

## 5.5 Testing Usability

## 6 Discussion

## 7 Conclusions

# Bibliography