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Masterarbeit

Automated UI Discovering for Web Application

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Aufgabenstellung

Problem Statement Understanding user behavior helps designer optimize their product user experiences. At the same time, user benefits more productive from it. Since user intents are elusive, changeable and sometimes even undetermined, predict their behavior usually difficult and impossible. In most cases, a user may performs a series of wasted actions before reach an intent destination. Nevertheless, user intents becomes clear step by step after performs a series of actions in a given context.

Scope of the Thesis To tackle the aforementioned challenges, the objective of this thesis is to develop a system that tracking user actions within a website, As a first step, literature review ... Based on the literature review, a intent model should be developed ... Then a system should implements the ... Nevertheless, user intents becomes clear step by step after performs a series of actions in a given context.

Tasks conduct a literature review to identify (research) question that simulates user input and predicts user ...

Requirements asdfasdf

Keywords asdfasdf

Ich erkläre hiermit, dass ich die vorliegende Arbeit selbstständig angefertigt, alle Zitate als solche kenntlich gemacht sowie alle benutzten Quellen und Hilfsmittel angegeben habe.

München, December 12, 2018

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Thank to everyone.

Abstract

This is a abstract.

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1 INTRODUCTION

1 Introduction

Introduction section [?]

1.1 Origin of Clickstream Research

1.2 This paper

2 RELATED WORKS

2 Related works

Related works section

2.1 Client-side Clickstream

2.2 Productivity Quantification

2.3 Sequence to Sequence Learning

3 EXPERIMENT DESIGN

3 Experiment Design

TODO

3.1 Lab Study Design

3.2 Field Study

3.3 Dataset

4 CLICKSTREAM MODELS

4 Clickstream Models

4.1 URL2Vec Embedding

4.2 LSTM based Recurrent Network Architecture

5 Implementation

5.1 Client-side architecture

5.1.1 Browser Market Share

5.1.2 Architecture: Chrome as Example

5.2 Server-side architecture

5.2.1 Model Evolution Automation Architecture

5.3 Communication Protocol

6 Evaluation

6.1 Metrics

6.2 Model Evaluation

6.2.1 Prediction Accuracy

6.2.2 F1

6.2.3 t-SNE

6.3 Rationality of Designed Tasks

6.4 Explored Model Architecture Comparasion

6.5 Discussion

7 Applications

7.1 Client Side Browser Plugin

7.2 Standard Browser Web APIs

8 CONCLUSIONS

8 Conclusions

8.1 Summary

8.2 Future Works

Appendix

All resources relates to the thesis are open source, they can be found publicly in:

- Thesis homepage: <https://changkun.us/master-thesis-hci/>;
- GitHub repostory: <https://github.com/changkun/MasterThesisHCI/>.

All related text, picture and video content are licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License¹. The other parts of the thesis (such as program source code) are licensed under a MIT Public License².

A Content of enclosed USB

1. */documents/* - TODO

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²<https://github.com/changkun/MasterThesisHCI/blob/master/LICENSE>

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