

Universidade do Minho

Escola de Engenharia Departamento de Informática

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Analysis and Visualisation of Dynamic Social Networks



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Master dissertation
Master Degree in Computer Science

Dissertation supervised by **Pedro Rangel Henriques Alda Lopes Ganarski**

ACKNOWLEDGEMENTS

Write acknowledgements here

ABSTRACT

Write abstract here (en) or import corresponding file

RESUMO

Escrever aqui resumo (pt) ou importar respectivo ficheiro

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LIST OF ABBREVIATIONS

SN Social Network

SNA Social Network Analysis
ONS Online Social Network

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

1.1 CONTEXT AND PROBLEM

SNs, SNAs, OSNs, Unstructured Data Analysis

- 1.2 MOTIVATION
- 1.3 GOALS

SOCIAL NETWORKS IN SOCIOLOGY

- 2.1 ORIGINS OF SOCIAL NETWORKS
- 2.2 SIX DEGREES OF SEPARATION

Small World Problem, Stanley Milgram's Experiment

ONLINE SOCIAL NETWORKS

Present table and comment. A, B and C are studied more deeply in the following sections.

3.1 PORTUGUESE AND ONLINE SOCIAL NETWORKS

Mentioning relevant facts from marktest study "Os Portugueses e as Redes Sociais 2016"

- 3.2 SN A
- 3.2.1 Domain Modeling
- 3.2.2 *API*
- 3.3 SN B
- 3.4 SN C

SOCIAL NETWORK ANALYSIS

4.1 NETWORK ANALYSIS

4.1.1 Scientific Background

Graphs

Statistics

...

- 4.1.2 Power Law
- 4.1.3 Centrality Measures
- 4.1.4 Link Analysis
- 4.1.5 ...
- 4.2 NETWORK VISUALISATION

It's a science by itself.

4.3 REAL WORLD APPLICATIONS

What SNAs are used for.

STATE OF THE ART

State of the art review; related work

5.1 BASICS/BACKGROUND/RELATED WORK

Example of a citation where the author should be cited directly on the text like, the work of ?, on producing LATEX files with BibTeX references.

Another way of citing whithout a direct mention to the author can used like the work done on C language (?).

THE PROBLEM AND ITS CHALLENGES??

PROPOSED SOLUTION

7.1 SOLUTION REQUIREMENTS

- 7.1.1 Requirements Analysis
- 7.1.2 Requirements Specification
- 7.1.3 Requirements Prioritisation
- 7.2 SYSTEM MODELING
- 7.3 SYSTEM ARCHITECTURE
- 7.4 TECHNOLOGY SELECTION
- 7.4.1 Technology A
- 7.4.2 Technology B
- 7.4.3 Technology C
- 7.4.4 Technology Comparison
- 7.4.5 Decision

IMPLEMENTATION

- 8.1 DATA EXTRACTION
- 8.1.1 Data Sources
- 8.2 DATA MINING
- 8.3 BACK END
- 8.4 FRONT END
- 8.5 OUTCOMES

CASE STUDIES

Application of main result (examples and case studies)

- 9.1 RESULTS
- 9.2 DISCUSSION
- 9.3 SUMMARY

CONCLUSION

Conclusions and future work.

10.1 CONCLUSIONS

10.2 PROSPECT FOR FUTURE WORK



SUPPORT MATERIAL

Auxiliary results which are not main-stream; or

Details of results whose length would compromise readability of main text; or

Specifications and Code Listings: should this be the case; or

Tooling: Should this be the case.