Requirement Specification

Social media ANALYSIS

mits project

2020

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**Revision History**

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# **Introduction**

## **Document Purpose**

This is a requirement specification document for a database system in support of social media analysis. The document describes objectives and goals of the system and models the functional requirements with use case, and class models. In addition, the document also clarifies constraints from both business and technical view and quality attributes of the system.

## **Project Overview**

Our project aims to develop a database system for supporting the study of influential operations in social media under various circumstances such as elections. The SQL compliant system offers powerful data queries, which provides a solid base for further data analysis. Accessible from web-tools and client tools, it enables researchers to work in both remote and local environments. Integrated with a toolchain that filter and inspect the large data from social media like Twitter, we create a platform that help the researchers easily find the influences between people, groups and even botnet.

## **System View**

The system is mainly composed of four parts: twitter data collection tool, data analytics tools database for data storage and web interface. The data collection tools supporting two methods of acquiring twitter data includes calling twitter API and downloading data from the data server. The system accepts both raw data and processed data from analytical tools such as NetMapper. The user can choose the desired data by providing filter on the web page and the data will be stored to the local database automatically. In addition, the acquired data will be delivered to ORA tool for relationship analysis presented as a graph diagram and the generated data will be stored to the database as new attributes.

A screenshot of a cell phone

Description automatically generated

# **Use Case Model**

|  |  |
| --- | --- |
| Use Case Name | Collect Twitter Data |
| Use Case ID |  |
| Importance Level |  |
| Primary Actor |  |
| Stakeholders |  |
| Description |  |
| Triggers |  |
| Precondition |  |
| Postcondition |  |
| Normal Flow of Events |  |
| Subflows |  |

|  |  |
| --- | --- |
| Use Case Name | Analyze twitter Data |
| Use Case ID |  |
| Importance Level |  |
| Primary Actor |  |
| Stakeholders |  |
| Description |  |
| Triggers |  |
| Precondition |  |
| Postcondition |  |
| Normal Flow of Events |  |
| Subflows |  |

|  |  |
| --- | --- |
| Use Case Name | Store Twitter Data |
| Use Case ID |  |
| Importance Level |  |
| Primary Actor |  |
| Stakeholders |  |
| Description |  |
| Triggers |  |
| Precondition |  |
| Postcondition |  |
| Normal Flow of Events |  |
| Subflows |  |

# **Functional Requirements**

[FUNC-000]XXX

# **Database Design**

# **Business Constraints**

[BC-000]XXX

# **Technical Constraints**

[TC-000]XXX

# **Quality Attributes Requirements**

[QA1]Reliability

|  |  |
| --- | --- |
|  | |
| Stimulus |  |
| Source |  |
| Environment |  |
| Artifacts |  |
| Response |  |
| Response Measure |  |

[QA2]Accuracy

|  |  |
| --- | --- |
|  | |
| Stimulus |  |
| Source |  |
| Environment |  |
| Artifacts |  |
| Response |  |
| Response Measure |  |

[QA3]Availiabilty

|  |  |
| --- | --- |
|  | |
| Stimulus |  |
| Source |  |
| Environment |  |
| Artifacts |  |
| Response |  |
| Response Measure |  |

[QA4]Performance

|  |  |
| --- | --- |
|  | |
| Stimulus |  |
| Source |  |
| Environment |  |
| Artifacts |  |
| Response |  |
| Response Measure |  |

# **Leal Requirements**