# Software Requirements Specification for Analytics-Driven SEO & SEA Optimization

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# 1 Introduction

This document outlines the requirements for developing a software system that integrates with Google Analytics to provide website and per-page analytics functionalities, generates a priority ranking algorithm for website optimization, and predicts web traffic per page.

## 1.1 Product Perspective

This software is designed for Spienzer B.V., a company specializing in SEO and SEA (Search Engine Optimization and Search Engine Advertising).

### 1.1.1 Product Functions

- Integrate with Google Analytics to access relevant data.
- Correlate search volume, SERP (Search Engine Results Page) position, and web traffic data for each webpage.
- Provide a user interface (frontend) for website and per-page analytics visualization.
- Implement a backend system to process and store data.
- Develop an algorithm to prioritize pages needing optimization based on integrated data.
- Develop an algorithm to predict potential number of visitors per webpage.

## 1.2 User Characteristics

The primary users are marketing employees, particularly those in the IT and SEO/SEA departments. Concrete user groups, personas and user stories to be created.

## 1.3 General Constraints

- The system should be compatible with major web browsers and operating systems.
- Performance and scalability should be sufficient to handle the expected data volume.
- Security measures should be implemented to protect sensitive data.

# 2 Specific Requirements

## 2.1 Functional Requirements

### 2.1.1 Google Analytics Integration

- The system shall seamlessly integrate with Google Analytics API.
- It shall be able to retrieve relevant data points such as number of visitors per webpage, time spent on given webpage per user or on average.

### 2.1.2 Analytics Functionality

- The frontend shall provide users with a clear and intuitive interface to visualize website and per-page analytics data.
- Users should be able to filter and sort data by various criteria.
- The system shall allow users to export data in various formats (e.g., CSV, Excel) for further analysis.

### 2.1.3 Priority Ranking Algorithm

- The algorithm shall consider factors such as search volume, SERP position, current traffic, and potential impact of optimization to rank the top 10 pages requiring modification.

### 2.1.4 Web Traffic Predicting Algorithm

- The algorithm shall consider factors such as search volume, CTR (Click-Through Rate), SERP position.

## 2.2 Non-Functional Requirements

### 2.2.1 Performance

- The system should be able to handle real-time data updates efficiently.
- Page loading times and data visualization should be optimized for a smooth user experience.

### 2.2.2 Usability

- The user interface shall be intuitive and easy to learn for users with varying levels of technical expertise.
- Clear documentation and manuals should be provided to guide users through the system's functionalities.

### 2.2.3 Reliability

- The system should be highly reliable with minimal downtime and error occurrences.

# 3 Design Constraints

## 3.1 Hardware and Software Interfaces

- The system should be compatible with Spienzer's existing infrastructure and software tools.

## 3.2 Other Constraints

- The development process should adhere to Agile Scrum methodology principles.

# Document Metadata

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