

# WebSite-Specific Smart Search App

## Requirements Document & Project Plan

### 1. Overview

A cross-platform web search application that allows users to search within a specific website (entered by the user), delivering highly relevant and user-friendly results. The app should offer advanced features like keyword highlighting, filtering, and AI-based suggestions, with a simple, intuitive user interface optimized for all devices.

### 2. Functional Requirements

#### 2.1 Website-Specific Search

Users can input a URL and a search query. The system performs a search only within the provided website. Results will be ranked by relevance, prioritizing title match, keyword density, and semantic similarity.

#### 2.2 Search Result Display

Results include: Title, Snippet/summary, URL. Searched keywords are highlighted in the results.

#### 2.3 Filtering Options

Filters based on: Date (e.g., last week, month, year), Content type (articles, PDFs, images), Keyword category.

#### 2.4 AI-Driven Suggestions

Suggested queries based on user's search history, most searched terms, and semantic expansion.

#### 2.5 Platform Support

Mobile apps for iOS and Android. Web app as responsive standalone site. Device compatibility across smartphones, tablets, and desktops.

#### 2.6 User Interface

Simple and minimalist design. Home screen with search bar and optional filters. Search results page with fast loading. Optional dark/light mode support.

### 3. Non-Functional Requirements

- Performance: Search results in under 2 seconds (typical case)
- Scalability: Support at least 10,000 concurrent users
- Accessibility: WCAG 2.1 AA compliant
- Security: HTTPS-only, no user data logging unless opted in
- Language: English (Phase 1), future localization possible

### 4. BDD Feature Scenarios (Sample)

#### Feature: Search Specific Website

Scenario: User searches a specific website for a keyword  
Given the user has entered "https://example.com" into the site field  
And the user has entered "quantum energy" into the search field  
When the user clicks "Search"  
Then the app should return results only from "https://example.com"  
And the results should highlight the keyword "quantum energy"

**Feature: Show AI Suggestions**

Scenario: User starts typing a query Given the user is on the search screen When the user types "quant" Then the app should display suggestions like "quantum energy", "quantum computing"

# Project Plan

Target Launch: February 2026

## Milestones

Milestone	Timeline (Start–End)	Deliverables
Requirement Finalization	Aug 6 – Aug 10, 2025	Finalized Requirements Document
UI/UX Design	Aug 11 – Aug 25, 2025	Wireframes, Design Prototypes
Core Search Engine (MVP)	Aug 26 – Sep 25, 2025	Working site crawler & indexer
Mobile App Infrastructure	Sep 10 – Oct 10, 2025	Search UI + API integration
Advanced Features	Oct 11 – Nov 5, 2025	AI Suggestions, Filters, Highlighting
Web App Development	Nov 6 – Nov 25, 2025	Fully functional web UI
Cross-Platform Testing & QA	Nov 26 – Dec 20, 2025	Test Reports, Bug Fixes
Deployment Prep & Beta	Jan 5 – Jan 15, 2026	App Store submission, Beta feedback loop
Final Launch	February 1, 2026	Official Release

## Team Structure

- Product Manager: Requirement finalization, client sync
- UX/UI Designer: Design wireframes, responsive layout
- Backend Developer: Web crawler, API, database
- Mobile Developers: iOS and Android app development
- AI Engineer: Query suggestion engine
- QA Engineers: Manual & automated testing
- DevOps: CI/CD pipeline, app store deployment

## Tools & Tech Stack

- Frontend: Flutter (mobile), React (web)
- Backend: Python (Flask/FastAPI), Node.js (optional)
- Search Engine: Elasticsearch / Custom-built indexer
- AI/ML: NLP libraries (e.g., spaCy, Transformers)
- Testing: pytest, Selenium, Appium
- Project Management: Jira, Figma, GitHub, Slack