Software Requirements Specification (SRS) for Academic Portfolio Website

1. Introduction

1.1 Purpose

The purpose of this document is to define the software requirements for an **academic portfolio website**, providing faculty members, researchers, and students with a platform to showcase their research, publications, projects, and professional achievements.

1.2 Document Conventions

This document follows IEEE 830-1998 SRS guidelines and includes detailed functional and non-functional requirements.

1.3 Intended Audience and Reading Suggestions

- **Developers** – For implementing the website
- **QA Engineers** – For testing compliance with requirements
- **Project Managers** – For overseeing development
- **End Users** – For understanding features and functionalities

1.4 Scope

This platform is an academic portfolio builder for researchers and faculty members. It allows users to create, customize, and manage academic profiles featuring:

- Personal details
- Research publications
- Teaching experience
- Projects
- Awards and recognitions
- Integration with external academic databases (Google Scholar, ORCID, ResearchGate, etc.)

1.5 Overview

The document provides:

- Functional requirements (user roles, interactions, data handling)
- Non-functional requirements (performance, security, usability)
- System models and constraints

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2. Overall Description

2.1 Product Perspective

This is a **web-based SaaS application** providing academic users with portfolio-building capabilities.

2.2 Product Functions

- User authentication and profile management
- Portfolio creation and customization
- Research publication and project management
- Academic integrations and citation management
- Website analytics and visitor tracking
- Collaboration and networking features

2.3 User Classes and Characteristics

- **Admin Users** – Manage the platform, monitor activity, and ensure compliance
- **Academic Users (Faculty, Researchers, Students)** – Create and manage portfolios
- **Visitors** – View academic profiles and publications

2.4 Operating Environment

- Cloud-based application hosted on AWS/GCP/Azure
- Supports all modern browsers (Chrome, Firefox, Edge, Safari)
- Mobile and desktop responsive design

2.5 Design and Implementation Constraints

- Compliance with **GDPR** and **FERPA** for data privacy
- Secure authentication (OAuth, SAML, 2FA support)
- Scalability to support **thousands of profiles**

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3. Specific Requirements

3.1 Functional Requirements

3.1.1 User Authentication & Profile Management

- Users can **register** via email or academic institution login (SSO)
- Users can **update profile details** (photo, bio, affiliations, contact information)
- Profile privacy settings: Public, Restricted, Private

3.1.2 Portfolio Creation & Customization

- Users can **add/edit/delete** sections such as:
    - About Me
    - Research Interests
    - Publications
    - Projects
    - Teaching Experience
    - Awards & Recognitions
- Custom themes and layout selection
- Domain linking support (custom subdomains)

3.1.3 Research Publications & Citation Management

- Users can import publications from **Google Scholar, ORCID, ResearchGate**
- Auto-generated citations in multiple formats (APA, IEEE, MLA)
- DOI and BibTeX import support

3.1.4 Project & Collaboration Management

- Users can showcase research projects with **detailed descriptions, images, and external links**
- Integration with **GitHub, arXiv, and institutional repositories**

3.1.5 Teaching & Academic Experience

- Users can add course details, syllabi, and student feedback
- Display lecture slides and course materials

3.1.6 Website Analytics & Visitor Tracking

- Users can view **profile visit statistics**
- Integrated with Google Analytics for advanced tracking

3.1.7 Networking & Collaboration Features

- Ability to **follow** and **message** other academics
- Collaboration requests and endorsements

3.1.8 Mobile & SEO Optimization

- Mobile-first responsive design
- Optimized for **Google Scholar indexing**

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

- Website loads in **<3 seconds**
- Supports **10,000+ concurrent users**

3.2.2 Security Requirements

- **SSL encryption** for all user interactions
- **OAuth 2.0 and SAML authentication** support
- **Role-based access control (RBAC)**

3.2.3 Usability & Accessibility

- WCAG **2.1 Level AA** compliance for accessibility
- Intuitive dashboard and editor interface

3.2.4 Availability & Reliability

- **99.9% uptime** guarantee
- Auto-scaling infrastructure with cloud hosting

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4. System Features

Feature	Description
User Authentication	Secure login with multi-factor authentication
Portfolio Customization	Drag-and-drop sections, themes, and custom domains
Research Integration	Auto-sync with Google Scholar, ORCID, ResearchGate
Analytics	Visitor stats, engagement insights
Collaboration	Follow academics, send messages, request collaborations

Mobile Support	Responsive design for mobile and tablets

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5. External Interface Requirements

5.1 User Interfaces

- **Dashboard** for managing academic profiles
- **Editor** for adding and customizing content
- **Public profile view** optimized for readability

5.2 Hardware Interfaces

- Works on any standard **PC, tablet, or smartphone**

5.3 Software Interfaces

- **Google Scholar API** for publication imports
- **GitHub API** for research projects
- **Google Analytics API** for visitor tracking

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6. Other Requirements

- **Scalability**: Multi-tenant SaaS platform
- **Compliance**: GDPR, FERPA data privacy
- **SEO Optimization**: Structured metadata, schema.org markup

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7. Appendices

7.1 Acronyms

- **ORCID**: Open Researcher and Contributor ID
- **SEO**: Search Engine Optimization
- **WCAG**: Web Content Accessibility Guidelines

7.2 References

- IEEE 830-1998 SRS Standard
- GDPR Compliance Guidelines
- W3C WCAG 2.1 Accessibility Standards