

# **CSE 687 OBJECT ORIENTED DESIGN PROJECT PROPOSAL**

## **ScholarSphere**

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## 1. INTRODUCTION

Publications and research are critical to the growth of academia and science. It can be challenging and time-consuming to organize and keep up with the latest research, identify relevant papers, and collaborate with other academics. Researchers, academicians, and scholars can more efficiently manage their research, publications, and collaborative efforts by utilizing a dedicated Research and Publication Management Portal, which can speed up these processes and provide a centralized platform.

## 2. PORTAL OVERVIEW

The basic goal behind this portal is to provide a complete online environment for organizing research and publishing. The system will enable the following:

- **Publication Management**: The Publication Management function enables users to track their publications, submit original research articles, and manage co-authorships.
- **Cooperation in Research**: Encourage cooperation in research by bringing together researchers with similar interests, allowing for collaborative initiatives and co-authorship of papers.
- **Access to Resources**: Provide students with access to scientific publications, research papers, and other materials. Our analytics tools track research impact, citation counts, and other relevant metrics.

## 3. WHY IT'S A KILLER APP

The site offers a cohesive response to major issues facing the research and academic communities, which is:

- **Integrated**: Putting research management, collaboration tools, and publication tracking on one platform.
- **User-Friendly**: Research and publishing management for academicians and researchers is made easier with a simple UI.
- **Rich in Resources**: Providing access to large databases of papers, journals, and other study resources.

## 4. TARGET USERS

A wide range of users in the academic and research community are the target audience for the portal:

- **Academic Researchers**: Academicians and scholars seeking a productive method for organizing their publications and research portfolios.
- **Graduate Students**: Research-engaged students who must coordinate with supervisors, manage their thesis work, and obtain resources.

## 5. SCOPE

The portal will have multiple essential elements:

- **User Profiles**: Individualized accounts containing information on publications, joint ventures, and areas of research interest.
- **Research Dashboard**: A primary location where users may oversee their publications, partnerships, and research initiatives.
- **Resource Library**: Online databases, journals, and digital libraries available for study.
- **Collaboration Tools**: Functionalities to promote interaction and cooperation between researchers.
- **Review and Publication Process**: A simplified procedure for submitting, reviewing, and publishing research papers.

## 6. FLEXIBILITY

The project is considered modest in terms of technical complexity. We intend to leverage ReactJS for frontend development in order to provide a dynamic and responsive user experience. The backend will be driven by C++ due to its performance and efficiency, both of which are required for managing sophisticated data processing and activities. We'll use MongoDB for our database needs because it's a versatile NoSQL solution that can handle unstructured data, which is common in research and publication records. The primary technological challenges will be developing strong collaboration features, assuring user-friendly navigation, and seamlessly combining these many technologies.