

## **19CSE445 - Cloud Computing**

### **Cloud-Edge Publication Repository for Academic Management**

#### ***Abstract:***

A cloud-edge hybrid system for academic publication management, leveraging AWS IoT Greengrass and Amazon Web Services (AWS). The system utilizes scalable storage and computational resources hosted on AWS for the cloud component, while AWS IoT Greengrass extends cloud capabilities to edge devices within the academic institution. By deploying lightweight compute and storage resources on local devices, the aim is to enhance performance and reduce latency for publication management tasks, And through a comparative analysis, to conduct a study that evaluates the effectiveness of cloud and edge deployments in terms of performance, scalability, and cost-effectiveness, shedding light on the benefits and trade-offs of each approach for academic workflows.

ScholarSync offers several advantages for academic institutions and researchers alike. By deploying a cloud-edge hybrid system for publication management, users benefit from enhanced accessibility and efficiency. The cloud component hosted on AWS provides scalable storage and computational resources, ensuring reliable access to scholarly works from anywhere with an internet connection. Additionally, leveraging AWS IoT Greengrass extends cloud capabilities to edge devices within the academic institution, enabling faster access to publications and reducing latency for users accessing the system locally. This hybrid approach not only improves performance but also offers cost-effectiveness by optimizing resource utilization. Moreover, by facilitating quicker access to scholarly works, the system enhances collaboration among researchers and educators, ultimately advancing academic endeavors and knowledge dissemination.