

[Internship Final Report]

Name: John Doe

Intern ID: TNS-CLOUD-2025-02

Program: Cloud Internship Program

Company: TechNova Solutions

Mentor: Mr. Alex Carter

Internship Period: February 1, 2025 – May 31, 2025

****1. Introduction****

The internship at TechNova Solutions aimed to enhance my practical knowledge of cloud computing, specifically within the AWS ecosystem. The primary focus was on implementing a secure file storage and retrieval system for the company's Virtual Internship Portal.

****2. Objectives****

- Learn and implement Amazon S3 for document storage.
- Secure access via IAM and signed URLs.
- Automate file uploads and retrievals using Python (Boto3).
- Follow best practices for cloud security.

****3. Tasks Completed****

- Set up and configured an S3 bucket with folder structure (joining-letters, certificates, reports).
- Created IAM users with limited access roles.
- Wrote Python scripts to generate pre-signed URLs for file access.
- Worked with Flask backend to integrate upload/download functionality.
- Documented the entire architecture and codebase.

****4. Challenges and Solutions****

- Faced CORS issues during frontend integration. Solved by configuring S3 CORS policy.
- Handled file versioning by enabling bucket versioning and tracking file metadata.

****5. Learning Outcomes****

- Practical experience with AWS IAM, S3, and security configurations.
- Improved Python and cloud automation skills.
- Understood the importance of access control in real-world applications.

****6. Conclusion****

This internship gave me a solid foundation in cloud computing practices. The hands-on experience in setting up a scalable and secure file storage system will greatly benefit my career.

****7. Acknowledgments****

I am grateful to TechNova Solutions and Mr. Alex Carter for their guidance and support throughout the internship period.

[Signature]

John Doe

May 31, 2025