AWS Project Report – Portfolio Hosting Using S3, CloudFront & Cloudflare Pages

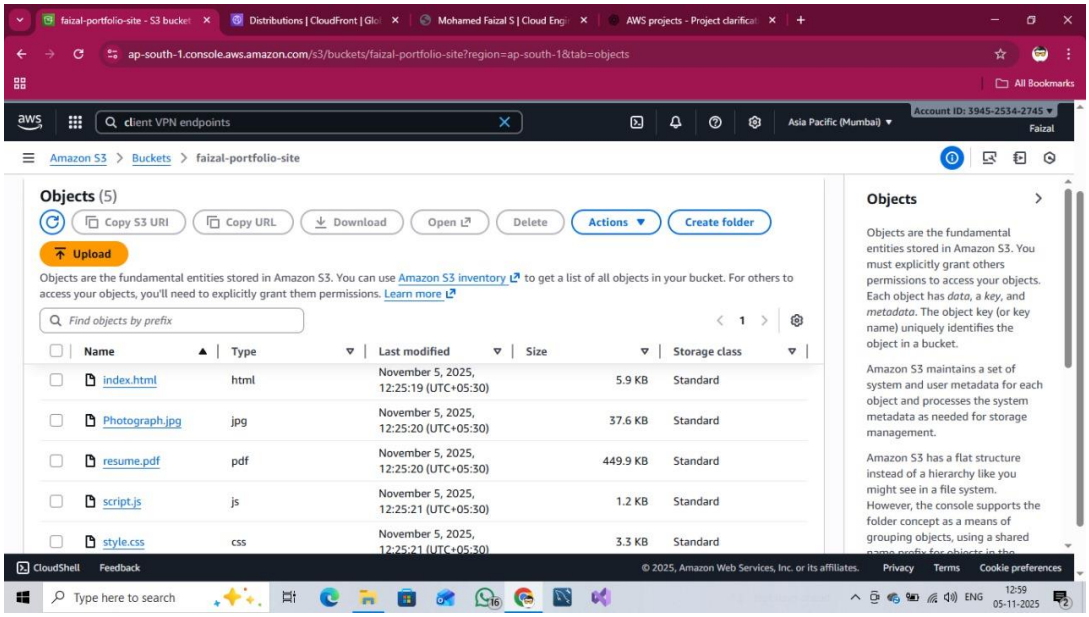
1. Introduction

This project demonstrates how to deploy a static portfolio website using Amazon S3, Amazon CloudFront, and Cloudflare Pages. The goal of this project is to achieve secure, highly available, and globally optimized static website hosting with two CDN layers and restricted S3 public access.

2. Website Files Upload to S3 Bucket

Static website files such as HTML, CSS, JavaScript, images, and resume.pdf were uploaded to an Amazon S3 bucket. The bucket was configured as private with correct MIME types and proper folder structure for secure and efficient static hosting.

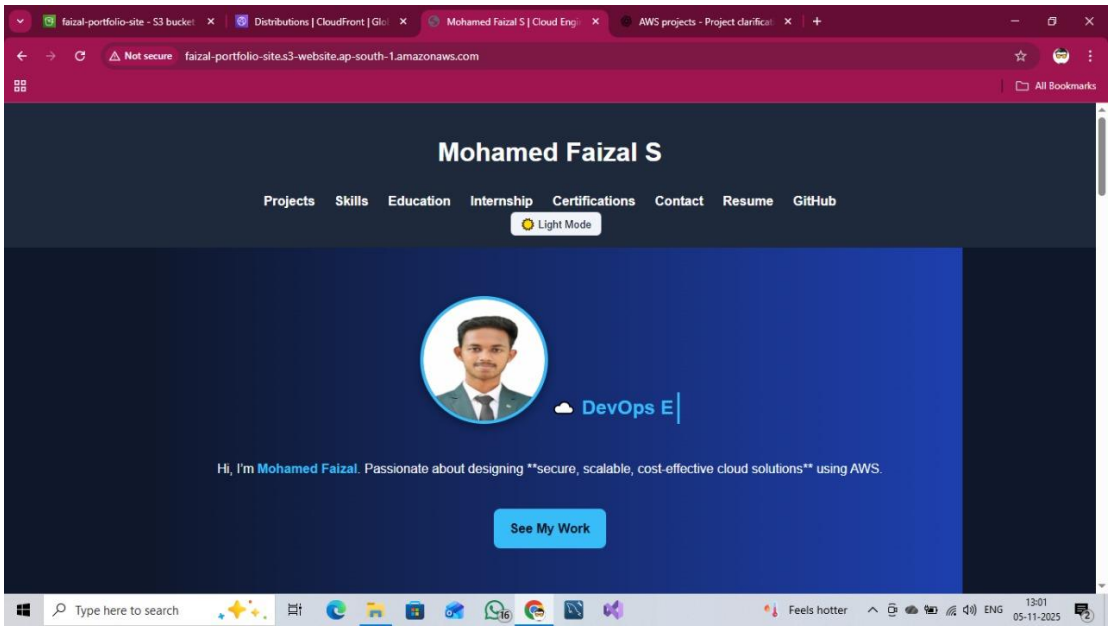
S3 OBJECTS



3. S3 Bucket Static Website Hosting Enabled

The S3 bucket's static website hosting feature was enabled. The index.html file was configured as the root document. Public access was blocked, and permissions were configured so CloudFront is the only service allowed to access the bucket.

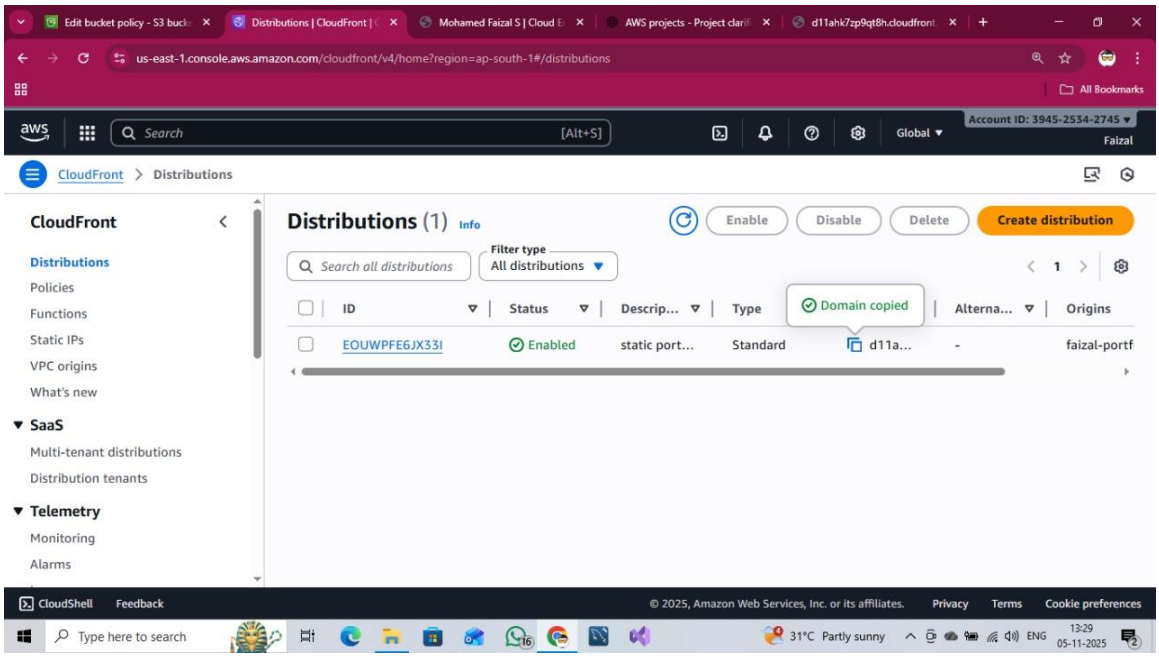
S3 STATIC WEBSITE HOSTING



4. CloudFront Distribution Configuration

A CloudFront distribution was created to deliver the static website globally with improved performance and secure HTTPS access. Origin Access Control (OAC) was enabled to ensure the S3 bucket can only be accessed through CloudFront.

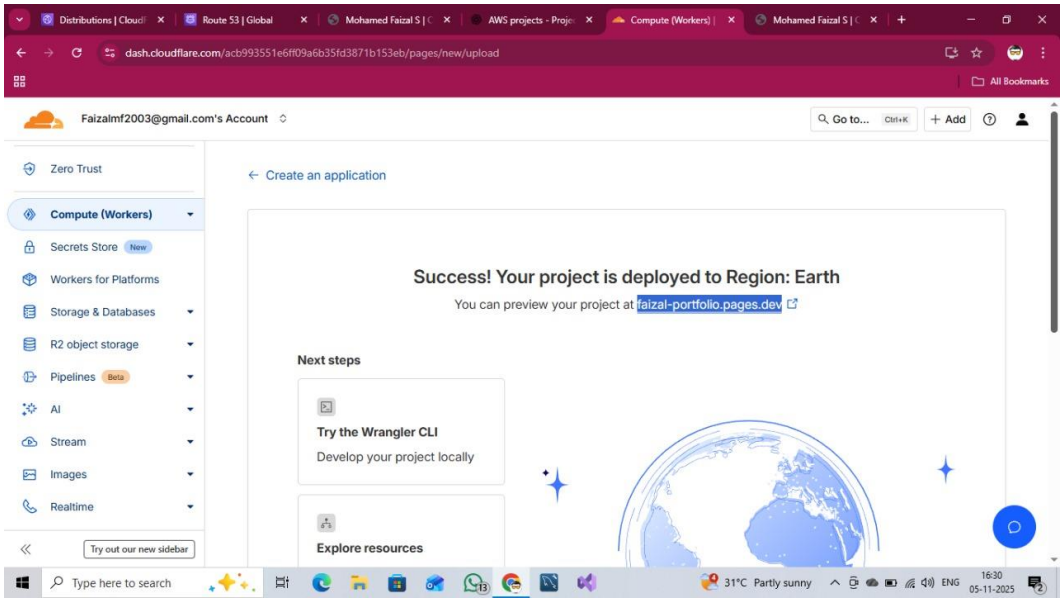
CLOUDFRONT DISTRIBUTION



5. Cloudflare Pages Deployment

Cloudflare Pages was used as an additional hosting method. The same website files were deployed to Cloudflare, providing a secondary global CDN and additional optimization features.

CLOUD FLARE PAGES DEPLOYMENT



6. Final Output

The website is successfully accessible using both CloudFront and Cloudflare Pages. Both hosting methods ensure global availability and fast delivery.

FINAL WEBSITE VIEW

7. Technologies Used

- Amazon S3 (Static Website Hosting)
- Amazon CloudFront (CDN Distribution)
- Cloudflare Pages (Secondary Hosting)
- IAM Policies
- Bucket Policy & OAC

8. Conclusion

This project successfully demonstrates hosting a secure and globally distributed portfolio website using AWS and Cloudflare. The combination of S3, CloudFront, and Cloudflare Pages provides strong performance, enhanced security, global caching, and an easy deployment workflow.