

# **CI/CD Pipeline for React App using CodePipeline and S3**



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# Introducing Today's Project!

## What is CI/CD and AWS CodePipeline?

CI/CD stands for Continuous Integration and Continuous Delivery. AWS CodePipeline is a fully managed continuous delivery service that helps automate the build, test, and deploy phases of your release process.



## How I Used AWS Services in This Project

- **AWS CodePipeline:** For automating build and deployment stages
- **AWS CodeBuild:** For installing dependencies and building the React app
- **Amazon S3:** For static website hosting and storing build artifacts



## One Thing I Didn't Expect...

Even with a proper `buildspec.yml` and CodePipeline setup, the S3 hosted site initially returned a **403 Forbidden** error due to incorrect permissions.



## This Project Took Me...

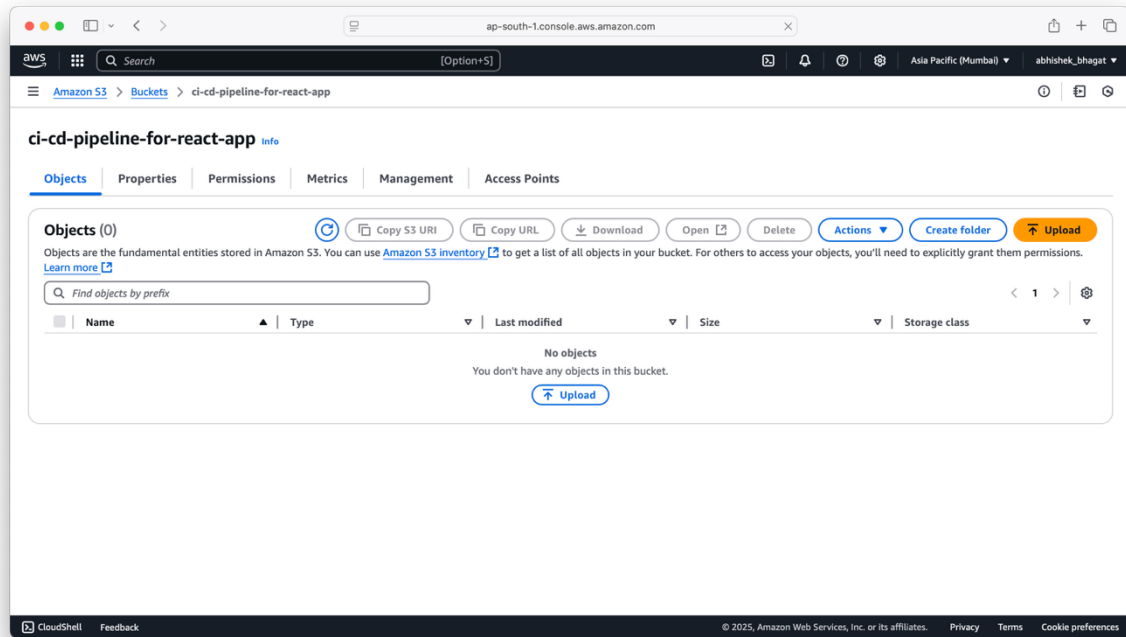
- 30 minutes



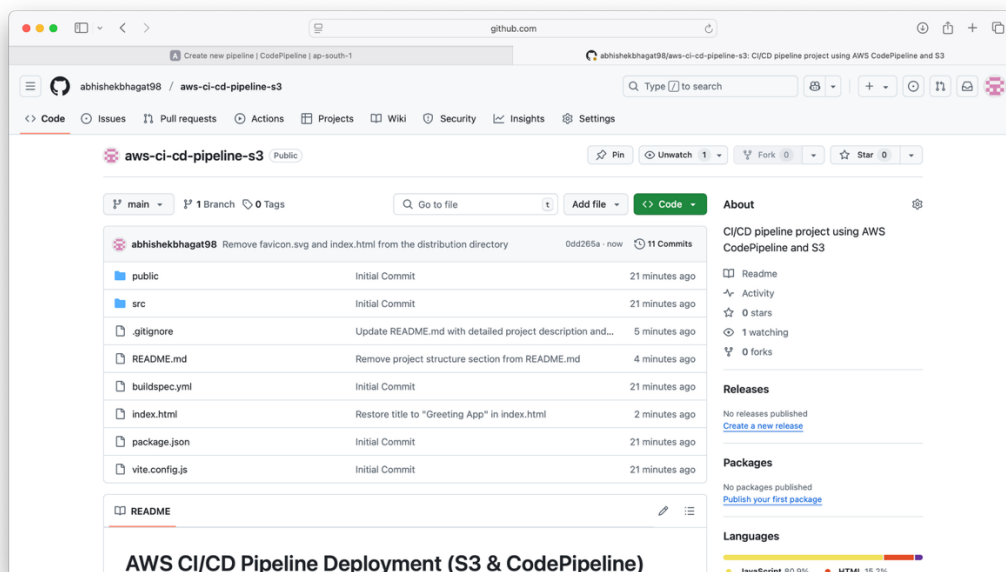
# Project Steps Breakdown

## 1. Created an S3 Bucket

- Enabled **Static Website Hosting**
- Configured permissions to allow public access

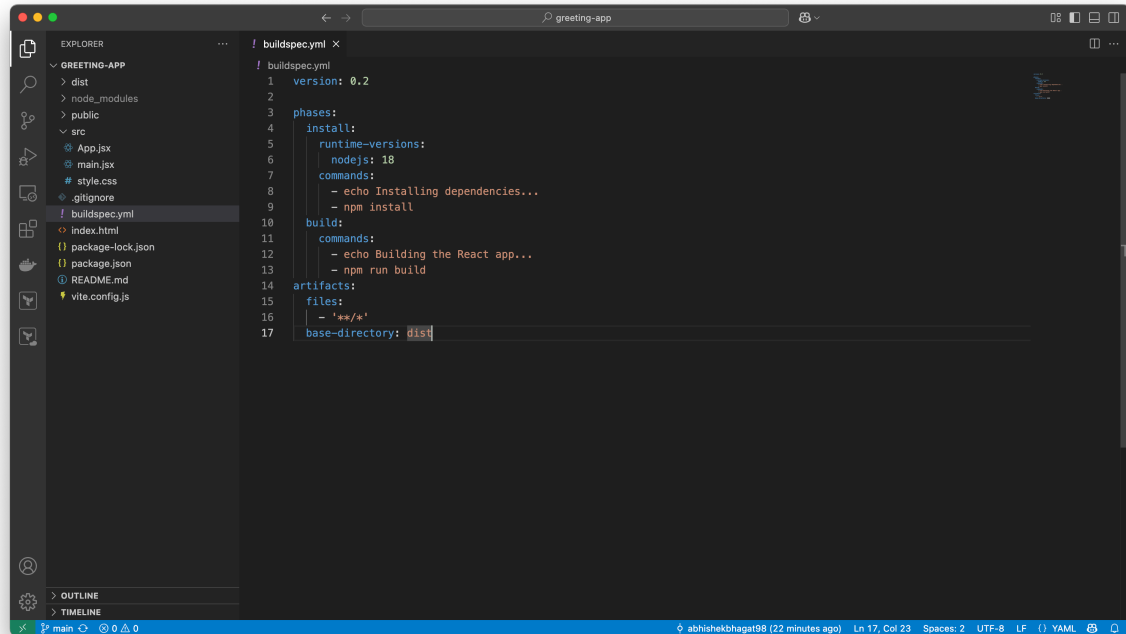


## 2. Created a GitHub Repo and Pushed the Code





### 3. Added a buildspec.yml File



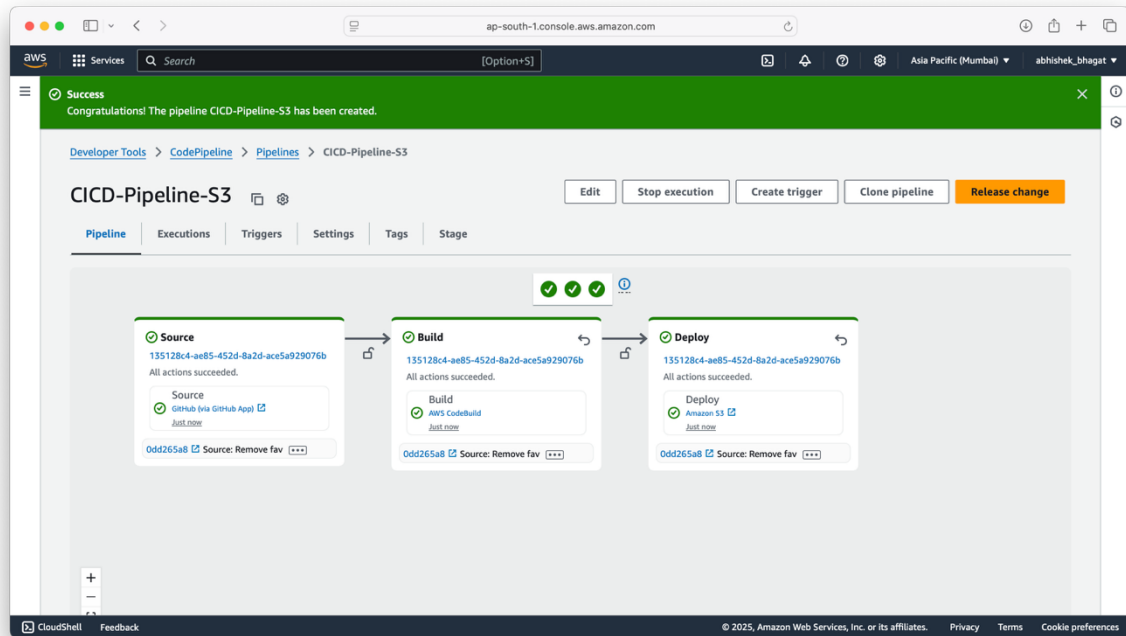
```
! buildspec.yml
1  version: 0.2
2
3  phases:
4    install:
5      runtime-versions:
6        nodejs: 18
7      commands:
8        - echo Installing dependencies...
9        - npm install
10   build:
11     commands:
12       - echo Building the React app...
13       - npm run build
14   artifacts:
15     files:
16       - '**/*.*'
17   base-directory: dist
```

### 4. Set Up CodeBuild

- Used Node.js 18 runtime
- Connected to GitHub as the source
- Verified successful build with buildspec.yml

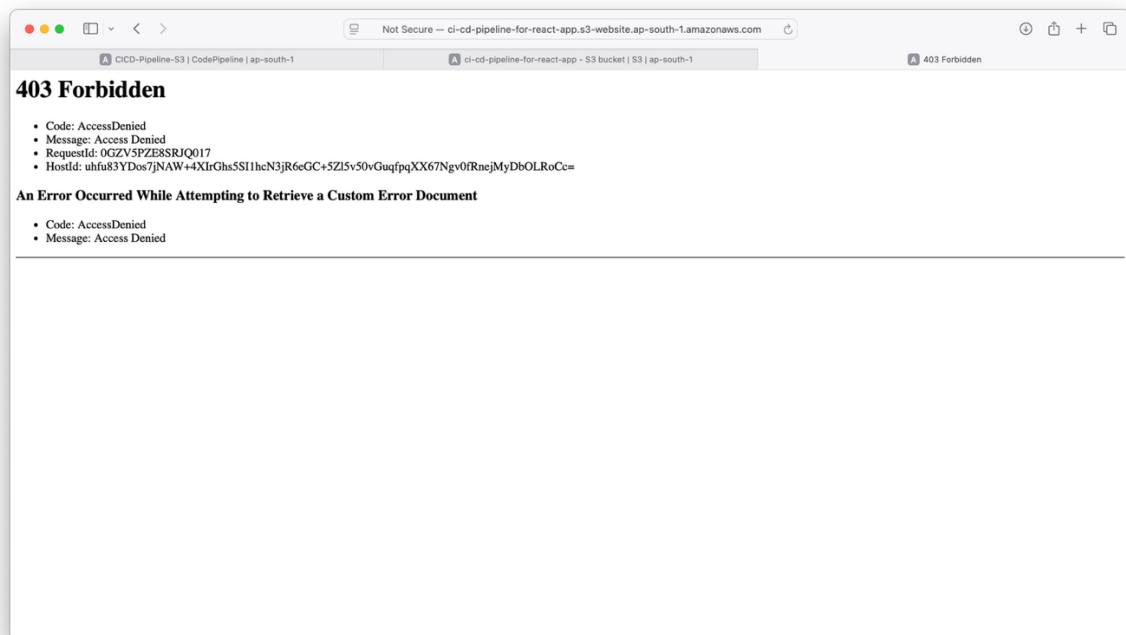
## 5. Created a CodePipeline

- **Source:** GitHub
- **Build:** CodeBuild project
- **Deploy:** S3 Bucket (configured as static site)

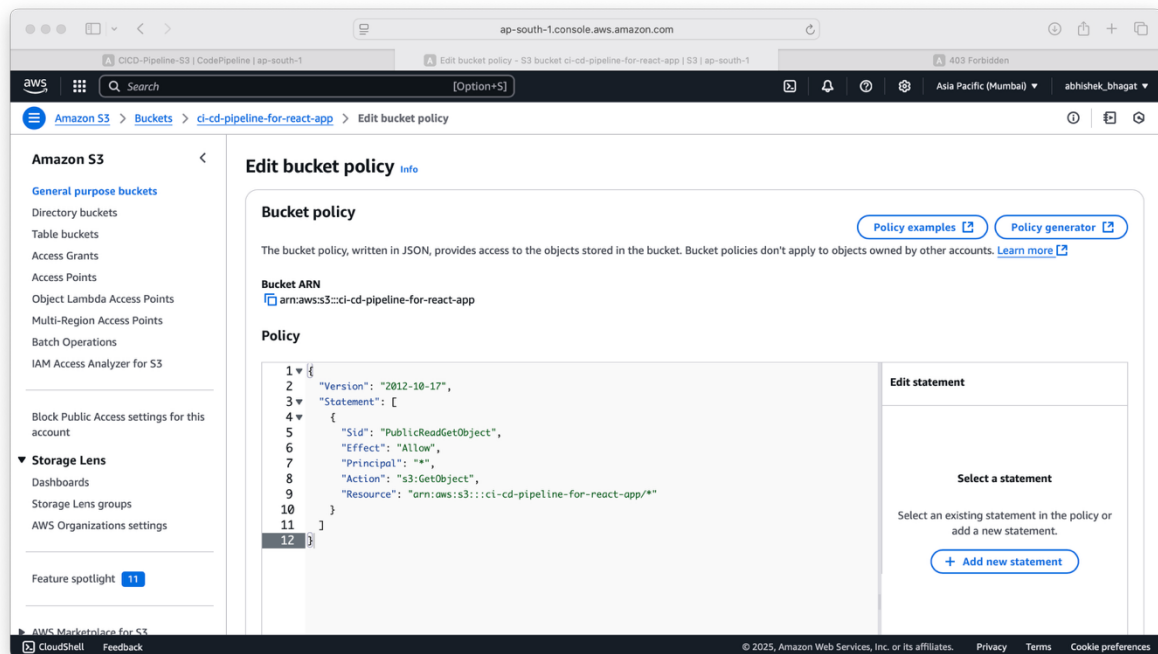


## ! Issues Faced

- **403 Forbidden:** Caused by missing public read permissions on the S3 bucket



## Resolved by applying the following bucket policy:



## Final Outcome

Successfully deployed a React web app using CodePipeline. Any future GitHub push now automatically triggers a pipeline to build and deploy the latest code to S3!

