Assign Lambda Invoke Permissions (If required)

In some scenarios, or if you configure the trigger directly from the S3 bucket's "Event Notifications" (instead of from Lambda's console), you might need to explicitly grant S3 permission to invoke your Lambda function.

If you followed the previous step precisely by adding the trigger *from the Lambda console*, this add-permission command might not be strictly necessary as Lambda handles it. However, it's an excellent command to know for troubleshooting or if you're scripting your setup!

Here's how to do it using the AWS CLI:

1. Ensure AWS CLI is Configured: Before running this, make sure you have the AWS CLI installed and configured with credentials that have sufficient permissions to modify Lambda functions (e.g., AdministratorAccess or specific Lambda/IAM permissions).
2. Execute the Command: Open your terminal or command prompt and run the following command. Make sure to replace arn:aws:s3:::image-processing-input-internship with your actual input bucket ARN, which should be arn:aws:s3:::image-processing-input based on our bucket names.

```
aws lambda add-permission \
--function-name ImageProcessorFunction \
--principal s3.amazonaws.com \
--statement-id s3invoke \
--action "lambda:InvokeFunction" \
--source-arn arn:aws:s3:::image-processing-input
```

   - --function-name ImageProcessorFunction: Specifies the Lambda function to grant permissions to.
   - --principal s3.amazonaws.com: Indicates that the S3 service is allowed to invoke this function.

- --statement-id s3invoke: A unique identifier for this permission statement.
- --action "lambda:InvokeFunction": The specific action that is allowed.
- --source-arn arn:aws:s3:::image-processing-input: Crucially, this restricts the permission to *only* your specific input S3 bucket. This is vital for security.

If the command executes successfully, it will return a JSON output confirming the added permission. This ensures that when a new object is created in your image-processing-input bucket, S3 has explicit permission to call your ImageProcessorFunction.