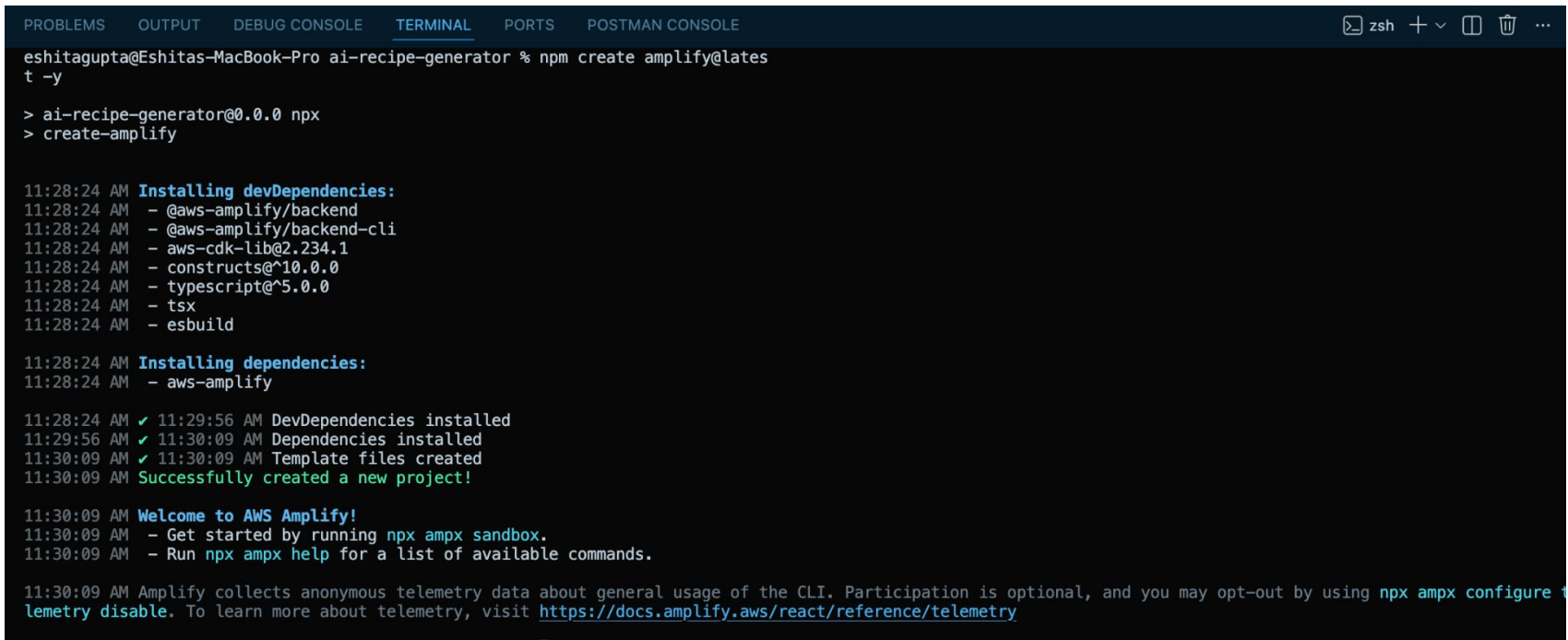


# Building a serverless App using GenAI

AWS Amplify, Cognito, Lambda, Appsync, Bedrock

After creating a react app as usual, added amplify dependency in my app. This adds a serverless backend.



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE
eshitagupta@Eshitas-MacBook-Pro ai-recipe-generator % npm create amplify@late
t -y

> ai-recipe-generator@0.0.0 npx
> create-amplify

11:28:24 AM Installing devDependencies:
11:28:24 AM - @aws-amplify/backend
11:28:24 AM - @aws-amplify/backend-cli
11:28:24 AM - aws-cdk-lib@2.234.1
11:28:24 AM - constructs@^10.0.0
11:28:24 AM - typescript@^5.0.0
11:28:24 AM - tsx
11:28:24 AM - esbuild

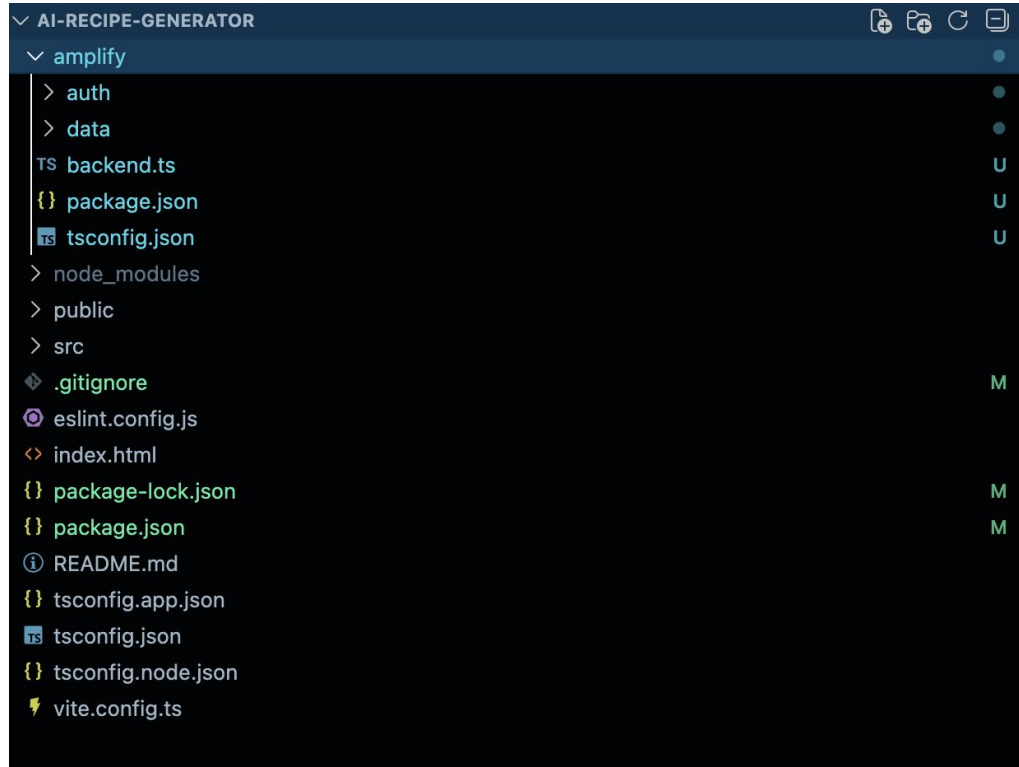
11:28:24 AM Installing dependencies:
11:28:24 AM - aws-amplify

11:28:24 AM ✓ 11:29:56 AM DevDependencies installed
11:29:56 AM ✓ 11:30:09 AM Dependencies installed
11:30:09 AM ✓ 11:30:09 AM Template files created
11:30:09 AM Successfully created a new project!

11:30:09 AM Welcome to AWS Amplify!
11:30:09 AM - Get started by running npx ampx sandbox.
11:30:09 AM - Run npx ampx help for a list of available commands.

11:30:09 AM Amplify collects anonymous telemetry data about general usage of the CLI. Participation is optional, and you may opt-out by using npx ampx configure t
lemetry disable. To learn more about telemetry, visit https://docs.amplify.aws/react/reference/telemetry
```

This shows the folder structure after the command is done.



# Linking the repository with AWS amplify on management console

aws

Search

[Option+S]

United States (N. Virginia)

Eshita (6336-9771-1385)

Administrator

All apps

Create new app

Give feedback

Support

Docs

✓ Choose source code provider

✓ Add repository and branch

✓ App settings

○ Review

App settings

Edit

App name  
ai-recipe-generator

Frontend build command  
npm run build

Framework  
None

Advanced settings

Edit

Build instance type  
Standard  
8 GiB Memory | 4 vCPUs | 128 GB Disk Space

Build image  
Using default image

Keep cookies in cache key  
Not enabled

Live package updates

Environment variables  
None

Server-Side Rendering (SSR) deployment  
Disabled

Cancel

Previous

Save and deploy

This is authentication layer, powered by AWS cognito through amplify, this sends user a code on email to login.

```
amplify > auth > TS resource.ts > ...
```

```
1  import { defineAuth } from "@aws-amplify/backend";
2
3  export const auth = defineAuth({
4    loginWith: {
5      email: {
6        verificationEmailStyle: "CODE",
7        verificationEmailSubject: "Welcome to the AI-Powered Recipe Generator!",
8        verificationEmailBody: (createCode) =>
9          `Use this code to confirm your account: ${createCode()}`,
10     },
11   },
12 });
```

# Error

This is where I came across a hurdle, as using AWS on local machine was still very new to me.

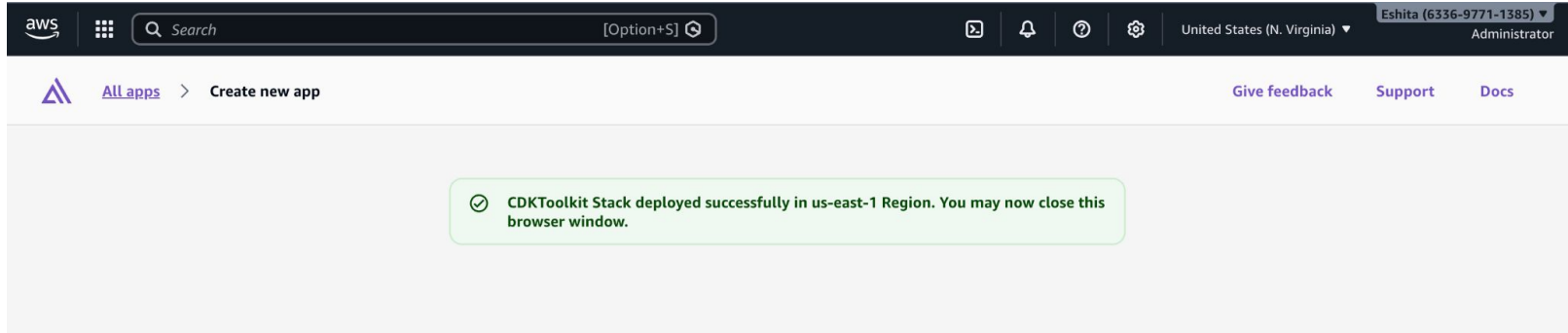
1. I connected to aws by adding my IAM access key and secret key.
2. Used command `npm ampx configure profile`.
3. Aws configure sso
4. Eventually bootstrapped the AWS application. ( next page)

```
eshitagupta@Eshitas-MacBook-Pro ai-recipe-generator % npx ampx configure profile
[SSMCredentialsError] UnrecognizedClientException: The security token included in the request is invalid
  Caused by: [UnrecognizedClientException] The security token included in the request is invalid
Resolution: Make sure your AWS credentials are set up correctly and have permissions to call the operation

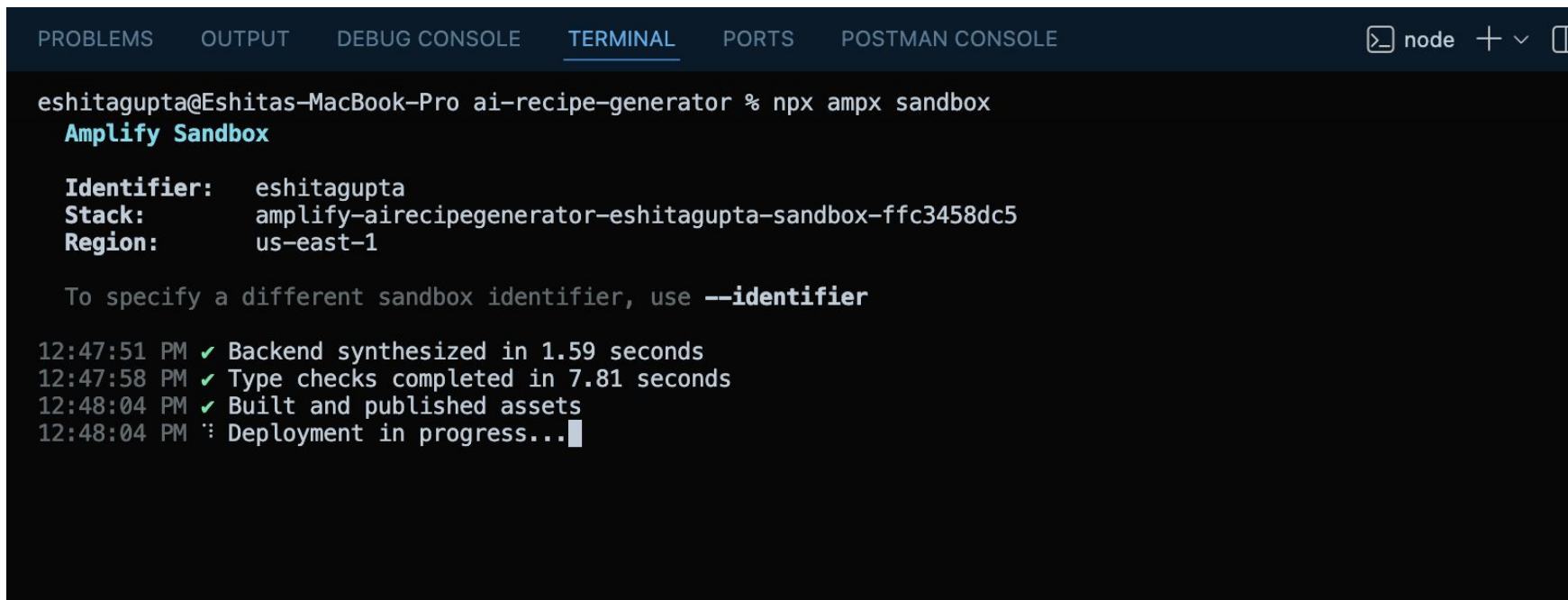
eshitagupta@Eshitas-MacBook-Pro ai-recipe-generator %
● eshitagupta@Eshitas-MacBook-Pro ai-recipe-generator % npx ampx configure profile
Profile 'default' already exists!
Follow the instructions at https://docs.amplify.aws/gen2/start/account-setup/
to configure Amplify IAM user and credentials.

❖ eshitagupta@Eshitas-MacBook-Pro ai-recipe-generator % aws configure sso
SSO session name (Recommended): amplify-admin
SSO start URL [None]: █
```

# This is after bootstrapping was done



Now, i could run the sandbox command.



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE node + -
```

```
eshitagupta@Eshitas-MacBook-Pro ai-recipe-generator % npx ampx sandbox
Amplify Sandbox

Identifier:    eshitagupta
Stack:       amplify-airecipegenerator-eshitagupta-sandbox-ffc3458dc5
Region:      us-east-1

To specify a different sandbox identifier, use --identifier

12:47:51 PM ✓ Backend synthesized in 1.59 seconds
12:47:58 PM ✓ Type checks completed in 7.81 seconds
12:48:04 PM ✓ Built and published assets
12:48:04 PM ⚙ Deployment in progress...█
```



# Which made the app running, Authenticator runs first.

Welcome to the AI-Powered Recipe Generator! Inbox x



**no-reply@verificationemail.com**

to me ▼

Use this code to confirm your account: 755321

↩ Reply

➦ Forward



# Authenticator in action

**We Emailed You**

Your code is on the way. To log in, enter the code we emailed to |\*\*\*@g\*\*\*. It may take a minute to arrive.

Confirmation Code

Confirm

Resend Code

# Inside the react app, powered by AWS Amplify

## Meet Your Personal Recipe AI

Simply type a few ingredients using the format ingredient1, ingredient2, etc., and Recipe AI will generate an all-new recipe on demand...

banana, peanut butter, dates, oats

Generate



# AWS bedrock runs under the hood to give us a recipe.

## Meet Your Personal Recipe AI

Simply type a few ingredients using the format ingredient1, ingredient2, etc., and Recipe AI will generate an all-new recipe on demand...

banana, peanut butter, dates, oats

Generate

With those ingredients, you can make a delicious no-bake energy bites or energy balls recipe! Here's a suggestion:

### Banana Peanut Butter Energy Bites

#### Ingredients:

- 1 cup old-fashioned oats
- 1/2 cup pitted dates (about 8-10 dates)
- 1/2 cup natural peanut butter
- 1 ripe banana, mashed
- 1/4 cup honey or maple syrup (optional, for added sweetness)
- 1/2 tsp vanilla extract
- 1/4 tsp ground cinnamon
- Pinch of salt

#### Instructions:

1. In a food processor, pulse the oats until they resemble a coarse flour. Transfer to a mixing bowl.
2. Add the pitted dates to the food processor and pulse until they form a sticky paste.
3. In the mixing bowl with the oats, add the date paste, peanut butter, mashed banana, honey/maple syrup (if using), vanilla extract, cinnamon, and salt. Mix until well combined.
4. Using your hands, roll the mixture into small balls, about 1-inch in diameter.
5. Optionally, you can roll the balls in additional oats, shredded coconut, or cocoa powder for extra texture and flavor.
6. Place the energy bites on a parchment-lined baking sheet or plate and refrigerate for at least 30 minutes to firm up before serving.

These energy bites are perfect for a healthy snack or a quick energy boost. They're packed with fiber, protein, and natural sweetness from the dates and banana. Enjoy!