This is the first time I've built a React / Amplify app, so I documented the general process and commands used to stand up an app like this.

***BUILD THE UI + API + DB (***[***read this***](https://aws-amplify.github.io/docs/js/start?platform=react)***)***

**Create Git Repo**

<https://github.com/timroadley/ce>

**Prepare AWS Amplify**

npm install -g @aws-amplify/cli  
amplify configure

aws configure 🡨 *this ensures your using the right account*

**Create React App**

npm install -g create-react-app --save  
create-react-app ce-ui  
cd ce-ui  
  
npm install @aws-amplify/api @aws-amplify/pubsub --save  
npm install aws-amplify --save  
npm install aws-amplify-react --save  
npm install react-router-dom -- save  
npm install axios --save  
npm install aws-appsync --save  
npm install aws-appsync-react --save

**Start React App**

npm start

**Setup Backend API**

amplify init  
amplify add api  
amplify push

**Edit Backend API**

amplify update api  
amplify push

**Check Amplify**

amplify status

**Add Hosting**

amplify add hosting

**Add Authentication**

amplify add auth  
amplify push

* Default > Username

<https://serverless-stack.com/chapters/create-a-cognito-user-pool.html>  
<https://serverless-stack.com/chapters/create-a-cognito-test-user.html>  
<https://serverless-stack.com/chapters/login-with-aws-cognito.html>

**Publish to Production**

amplify publish

***BUILD THE DATA LAYER (COLLECTORS, UPDATERS)***

**Prepare Serverless**

npm install -g serverless  
serverless login

**Create Serverless APP (**[**read this**](https://serverless.com/blog/serverless-python-packaging/)**)**

cd ce-data  
serverless create --template aws-python --path ce-data

*update serverless.yml*

npm install --save serverless-python-requirements serverless-prune-plugin

sls plugin install -n serverless-python-requirements  
serverless deploy  
virtualenv venv --python=python3  
source venv/bin/activate  
pip install whatever  
pip freeze > requirements.txt

*(where whatever is the name of the packages we need)*

***PUBLISHING THE WEB PAGE***

In <https://console.aws.amazon.com/amplify/home> you should set up the build settings so they can find the right files to assemble the site correctly

version: 1

frontend:

phases:

build:

commands:

- npm install --prefix app/ce-ui

- npm audit fix --prefix app/ce-ui

- npm run-script build --prefix app/ce-ui

artifacts:

baseDirectory: /app/ce-ui/build

files:

- '\*\*/\*'

cache:

paths: []

Make sure you also set the Rewrites and redirects up on Amplify Console as follows:

Source address: </^[^.]+$|\.(?!(css|gif|ico|jpg|js|png|txt|svg|woff|ttf|map|json)$)([^.]+$)/>

Target address: /

Type: 200 (Rewrite)

***MOVING MACHINES***

**If you ever run the code from another machine that clones the same repo, make sure to first run**

amplify pull

***Research Resources***

*Dropdowns and Select fields -*[*https://react-select.com/home*](https://react-select.com/home)

*Custom options for React Select -*[*https://medium.com/@lahiru0561/react-select-with-custom-label-and-custom-search-122bfe06b6d7*](https://medium.com/@lahiru0561/react-select-with-custom-label-and-custom-search-122bfe06b6d7)

*Working with data structures in Javascript:* [*https://medium.com/poka-techblog/simplify-your-javascript-use-map-reduce-and-filter-bd02c593cc2d*](https://medium.com/poka-techblog/simplify-your-javascript-use-map-reduce-and-filter-bd02c593cc2d)