

Deploying a web app

We've written web apps

- Seen them on "localhost"

How to get them where other people can see?

Static-vs-dynamic

You need a **host** for your content

A big factor is what you need to host

- static HTML/JS/CSS
 - `build/` contents after `npm run build`
- OR a server that generates dynamic content
 - Directly or via web services

Just static is easier/cheaper

- Limited functionality
- Great for one-way information flow

A few options

There are countless hosting providers

- Here are a few free/cheap options
 - I've used or heard recommended
 - Not an endorsement
 - Not exhaustive list
- Good to show off
 - Anything with high traffic/high reliability should pay for stronger options

Github pages

<https://docs.github.com/en/pages>

- Static only
- Either a site for repo, or a site for you
- Change settings to publish a `github.io` site

Confusing: Some options we DON'T want:

- We aren't building a site from `.md` files using Jekyll
- `gh-pages` CAN be used, not required
- Docs confuse by talking about both

Creating a GitHub Pages site for a repo

- Will publish to `https://{USER}.github.io/{REPO}/`
 - Or configure a domain you have registered
 - Registering a domain separate process (\$)

<https://create-react-app.dev/docs/deployment#github-pages>

Deploying Manually

- Configure the Github Pages in Repo settings
 - Branch
 - Directory
 - Configure `package.json`
 - set `homepage` to match Github
 - Ex: `https://{USER}.github.io/{REPO}/`
 - set build path to match setting choice
- ```
// one option
"scripts": {
 "build": "BUILD_PATH='./docs' react-scripts build",
 //Windows:"set BUILD_PATH='./docs' && react-scripts build",
```
- **WILL DESTROY EXISTING CONTENT!**
- `npm run build`, then add, commit, and push files

# Deploying with gh-pages

- Follow <https://create-react-app.dev/docs/deployment/#github-pages>
  - set `homepage` in `package.json`
  - install `gh-pages`
  - create `predeploy` and `deploy` scripts in `package.json`
- Configure Github Pages in Repo settings
  - `gh-pages` branch
- `npm run deploy` when you want to publish the site

## **Both configurations can take a few minutes**

- Refresh the Github Pages page in Repo Settings
  - Watch "last deployed"



# Additional Notes

- Can use custom domain name
  - You must have one registered (\$)
  - <https://docs.github.com/articles/using-a-custom-domain-with-github-pages/>
- Can have one overall subdomain for you
  - Create public repo `{username}.github.io`
    - Ex: `swiftone.github.io`
  - Will be `https://{username}.github.io/`
    - No required path
    - repo `/index.html` is `https://{username}.github.io/index.html`

# **Vercel offers hosting for various frameworks**

- Create-react-app on list
- Vercel is notable for Next.js (server-side React)
- Works by having a separate github repo
  - Push to that repo to deploy to site

# Fly.io has more free options

**<https://fly.io/docs/speedrun/>**

- Free tier for a lot of options
- Static requires running a server
  - Which you have to provide
  - But the docs have a demo
- I had some errors/bumps

# **Render offers free STATIC hosting, \$ for more**

**<https://render.com/>**

- I've not used them
- Wanted more access to my repo than I liked

**<https://create-react-app.dev/docs/deployment#render>**

# Amazon Web Services (AWS)

Notice: Most of AWS isn't always free

- And can wrack up bills if you exceed use
- BE CAUTIOUS

You have many options with Amazon

- S3 can host static websites
- Amplify can host a single page app
- Lightsail

```
https://docs.aws.amazon.com/AmazonS3/latest/
userguide/WebsiteHosting.html
```

# Summary - Hosting

- **Hosting providers**
  - Places to put your web content as a site
  - Offer their domain by default
  - You have to register a domain separately (\$)
    - Then configure host to use domain
- **Static files** (HTML/JS/CSS) vs server is a big factor
  - "Serverless" = Static files calling web services
    - Web services on other server than host
- Free and Paid options exist

# Summary - options

- So many hosting options
- Some examples:
  - Github pages
  - Vercel
  - Render
  - Fly
  - AWS S3
  - AWS Amplify
  - AWS Lightsail