

Frontend & Backend Changes

We structured the `.yml` file so that when a Git commit includes the phrase `/deploy-app`, the GitHub Action builds and deploys a new version of the app, implementing any changes that were made.

To demonstrate this, we changed the background color of the header in the frontend. Steps taken to achieve this include:

1. Open the file `src/frontend-react/src/components/layout/Header.jsx`.
2. Update the background color to `bg-blue-900/90`:

```
className={`fixed w-full top-0 z-50 transition-all  
duration-300 ${isScrolled ? 'bg-sky-700' : 'bg-transparent'}`}
```

To run the deploy app action, add the following to the Git commit message (ensure you are outside the container):

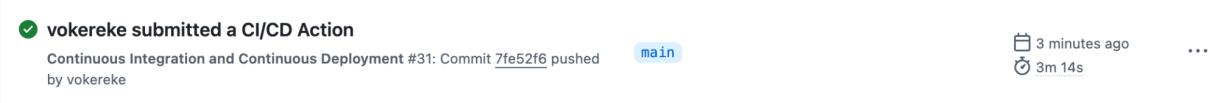
- Add `/deploy-app` to the commit message to re-deploy the frontend and backend.

```
git add .  
git commit -m "update frontend and backend version and header  
color /deploy-app"  
git push
```

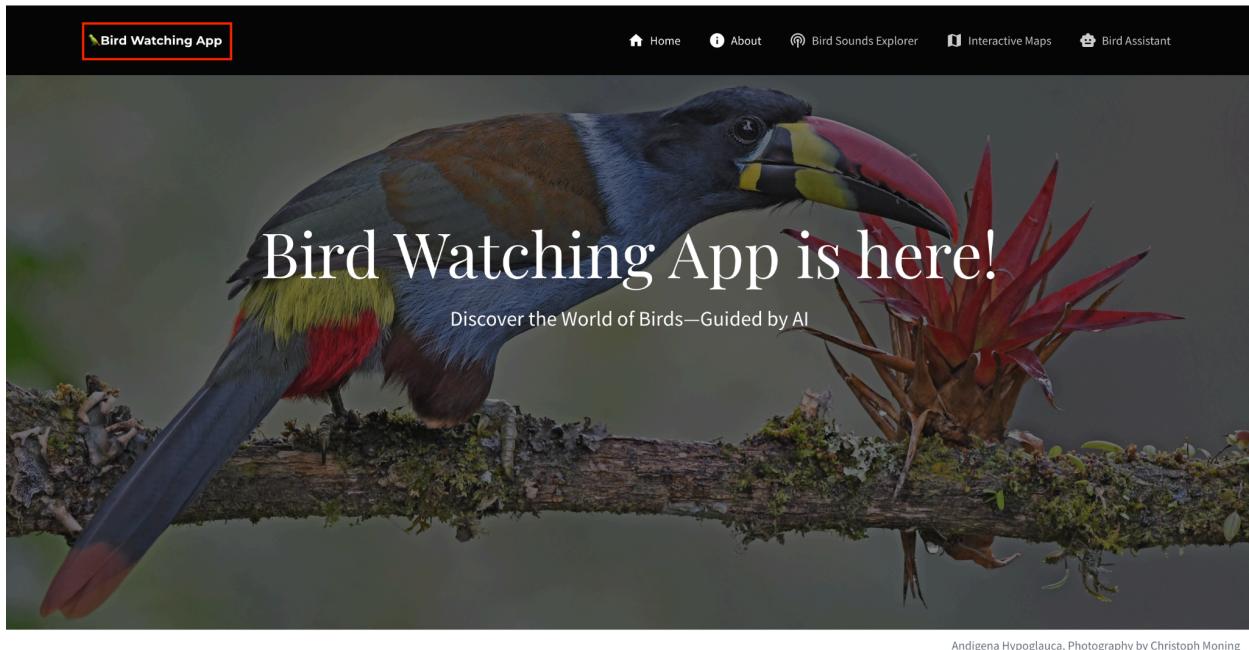
GitHub Action In Progress:



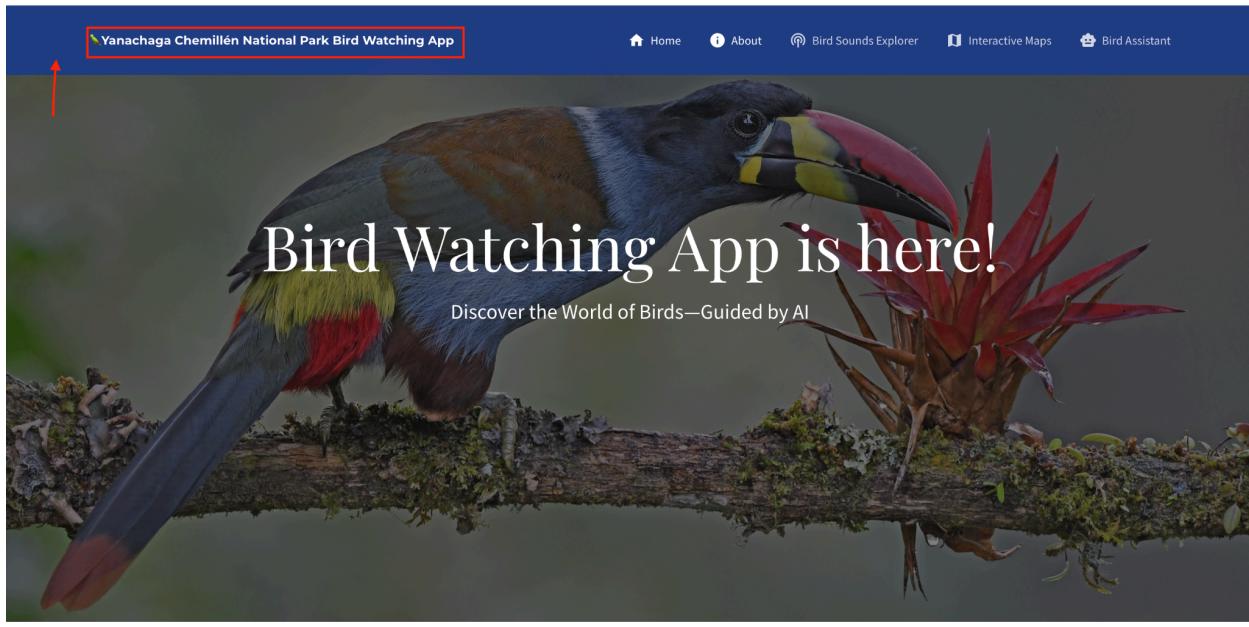
GitHub Action Successfully Implemented:



Header before change:



Header after change:



Scaling

Scaling by manually increasing and decreasing the load: To scale up, run the following code:

```
kubectl scale deployment frontend \
--replicas=5 \
-n bird-app-cluster-namespace
kubectl get pods -n bird-app-cluster-namespace
```

deployment.apps/frontend scaled				
NAME	READY	STATUS	RESTARTS	AGE
api-7fb549dc48-df2lw	1/1	Running	0	6m56s
frontend-db684cf76-4sgwv	0/1	Pending	0	0s
frontend-db684cf76-fjqch	0/1	ContainerCreating	0	0s
frontend-db684cf76-jvvwd	1/1	Running	0	48m
frontend-db684cf76-zzgxt	0/1	Pending	0	0s
nginx-ingress-controller-5f8c97c85f-nzmwh	1/1	Running	0	26h
vector-db-5cfdbd4894-gp6nf	1/1	Running	0	26h
vector-db-loader-2hw45	0/1	Completed	0	25h
vector-db-loader-db7b7	0/1	Completed	0	25h
vector-db-loader-gnlwg	0/1	Completed	0	25h
vector-db-loader-j94bp	0/1	Completed	0	25h
vector-db-loader-jqpq8	0/1	Completed	0	6h47m
vector-db-loader-nz84k	0/1	Completed	0	26h
vector-db-loader-pl2gm	0/1	Completed	0	25h
vector-db-loader-ptlnx	0/1	Completed	0	17h
vector-db-loader-snffsz	0/1	Completed	0	26h
vector-db-loader-xz577	0/1	Completed	0	16h

(base) victoriaokereke@Victorias-MBP deployment % kubectl get pods -n bird-app-cluster-namespace -w				
NAME	READY	STATUS	RESTARTS	AGE
api-7fb549dc48-df2lw	1/1	Running	0	12m
frontend-db684cf76-4sgwv	1/1	Running	0	5m6s
frontend-db684cf76-fjqch	1/1	Running	0	5m6s
frontend-db684cf76-jvvwd	1/1	Running	0	53m
frontend-db684cf76-slfnf	1/1	Running	0	5m6s
frontend-db684cf76-zzgxt	1/1	Running	0	5m6s
nginx-ingress-controller-5f8c97c85f-nzmwh	1/1	Running	0	26h
vector-db-5cfdbd4894-gp6nf	1/1	Running	0	26h
vector-db-loader-2hw45	0/1	Completed	0	26h
vector-db-loader-db7b7	0/1	Completed	0	26h
vector-db-loader-gnlwg	0/1	Completed	0	26h
vector-db-loader-j94bp	0/1	Completed	0	25h
vector-db-loader-jqpq8	0/1	Completed	0	6h53m
vector-db-loader-nz84k	0/1	Completed	0	26h
vector-db-loader-pl2gm	0/1	Completed	0	25h
vector-db-loader-ptlnx	0/1	Completed	0	18h
vector-db-loader-snffsz	0/1	Completed	0	26h
vector-db-loader-xz577	0/1	Completed	0	16h

To scale down, run the following code:

```
kubectl scale deployment frontend \
--replicas=1 \
-n bird-app-cluster-namespace
kubectl get pods -n bird-app-cluster-namespace
```

```
● (base) victoriaokereke@Victorias-MBP deployment % kubectl scale deployment frontend \
--replicas=1 \
-n bird-app-cluster-namespace
kubectl get pods -n bird-app-cluster-namespace

deployment.apps/frontend scaled
NAME          READY   STATUS    RESTARTS   AGE
api-7fb549dc48-df2lw   1/1     Running   0          12m
frontend-db684cf76-fjqch 1/1     Terminating   0          6m1s
frontend-db684cf76-fjqch 1/1     Running   0          6m1s
frontend-db684cf76-jvwvd 1/1     Terminating   0          54m
frontend-db684cf76-slfnf 1/1     Terminating   0          6m1s
frontend-db684cf76-zgxxt 1/1     Terminating   0          6m1s
nginx-ingress-controller-5f8c97c85f-nzmwh 1/1     Running   0          26h
vector-db-5cfdbd4894-gp6nf 1/1     Running   0          26h
vector-db-loader-2hw45 0/1     Completed   0          26h
vector-db-loader-db7b7 0/1     Completed   0          26h
vector-db-loader-gnlwg 0/1     Completed   0          26h
vector-db-loader-j94bp 0/1     Completed   0          25h
vector-db-loader-jqpq8 0/1     Completed   0          6h53m
vector-db-loader-nz84k 0/1     Completed   0          26h
vector-db-loader-pl2gm 0/1     Completed   0          25h
vector-db-loader-ptlnx 0/1     Completed   0          18h
vector-db-loader-snfsz 0/1     Completed   0          26h
vector-db-loader-xz577 0/1     Completed   0          16h
```

```
○ (base) victoriaokereke@Victorias-MBP deployment % kubectl get pods -n bird-app-cluster-namespace -w
```

NAME	READY	STATUS	RESTARTS	AGE
api-7fb549dc48-df2lw	1/1	Running	0	13m
frontend-db684cf76-fjqch	1/1	Running	0	6m27s
nginx-ingress-controller-5f8c97c85f-nzmwh	1/1	Running	0	26h
vector-db-5cfdbd4894-gp6nf	1/1	Running	0	26h
vector-db-loader-2hw45	0/1	Completed	0	26h
vector-db-loader-db7b7	0/1	Completed	0	26h
vector-db-loader-gnlwg	0/1	Completed	0	26h
vector-db-loader-j94bp	0/1	Completed	0	26h
vector-db-loader-jqpq8	0/1	Completed	0	6h54m
vector-db-loader-nz84k	0/1	Completed	0	26h
vector-db-loader-pl2gm	0/1	Completed	0	25h
vector-db-loader-ptlnx	0/1	Completed	0	18h
vector-db-loader-snfsz	0/1	Completed	0	26h
vector-db-loader-xz577	0/1	Completed	0	16h