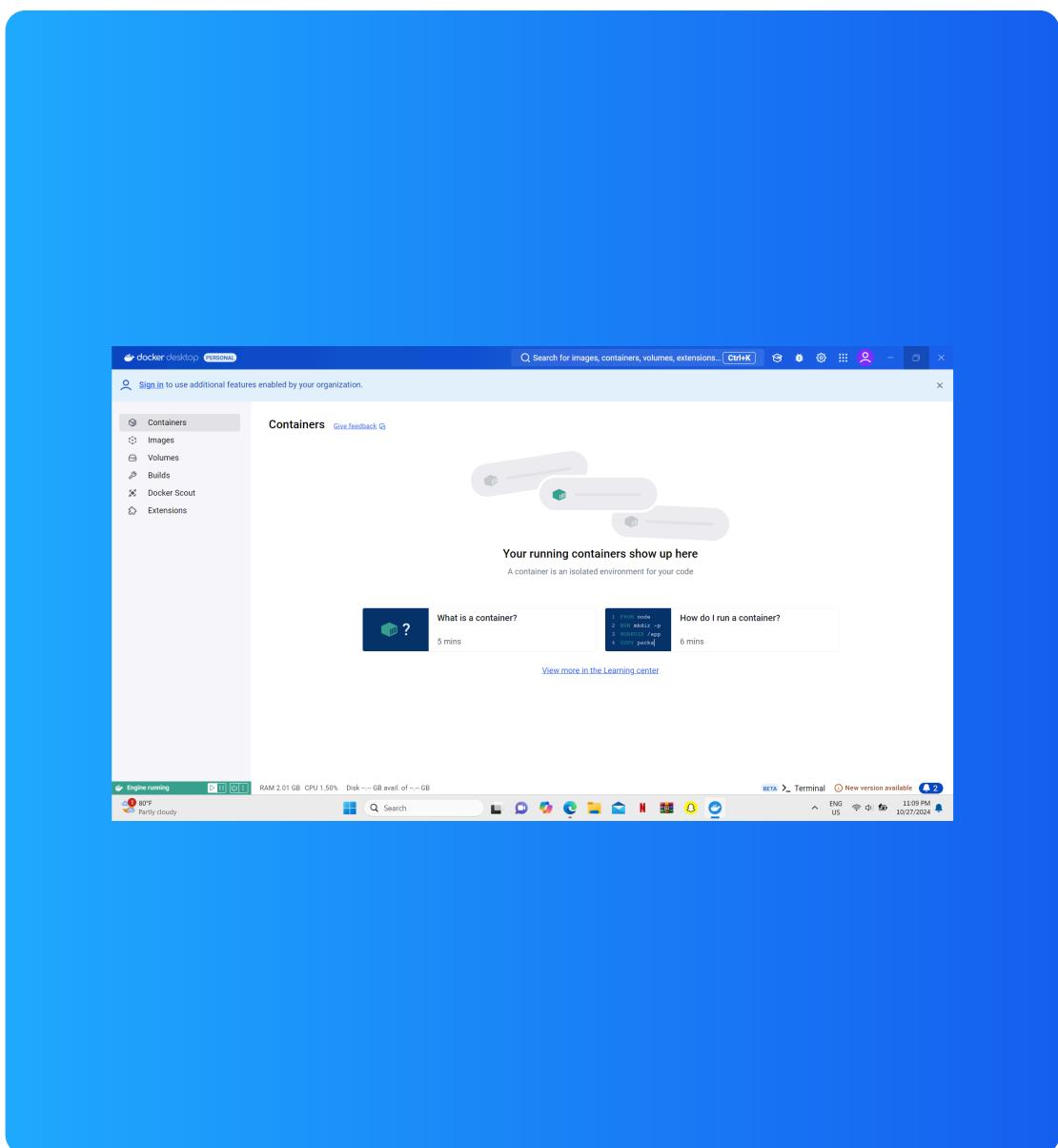




Containers on Elastic Beanstalk



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Introducing Today's Project!

What is Docker?

I utilized Docker to create an isolated environment for my web application, allowing me to manage dependencies, run my application consistently across environments, and scale easily if needed.

One thing I didn't expect...

To create an IAM User

This project took me...

I used an hour and 30 minutes for the whole project



Understanding Containers and Docker

Containers

Containers are lightweight, standalone, and executable unit of software that packages an application and its dependencies together, enabling it to run reliably across different computing environments.

A container image is a lightweight, standalone, and executable package that includes everything needed to run a piece of software, such as the application code, runtime, libraries, environment variables, configuration files, and dependencies.

Docker

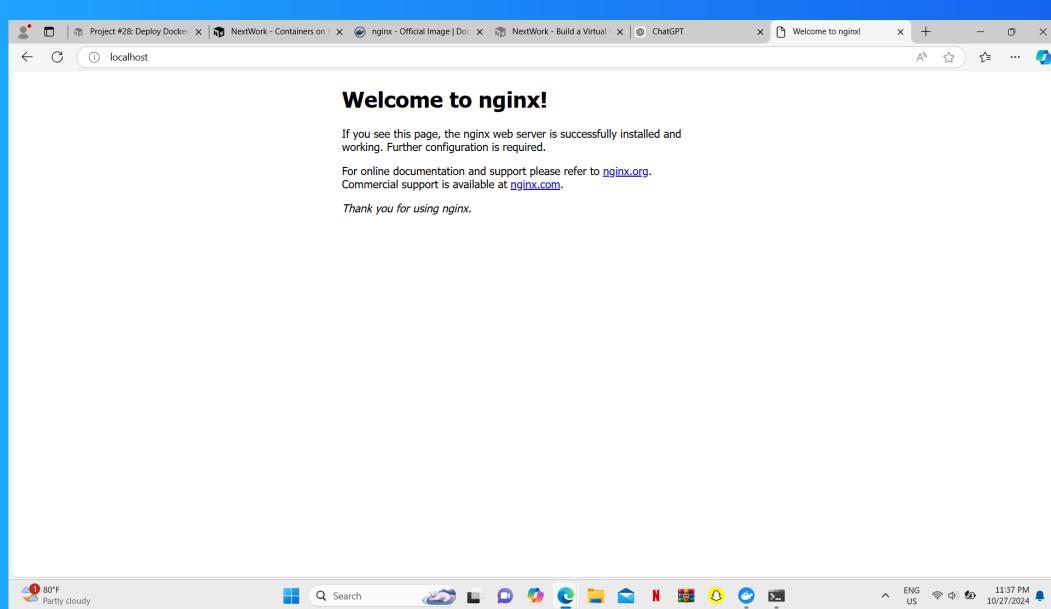
Docker Desktop is an application that provides an easy way to install, manage, and run Docker on a local machine. It includes Docker Engine, Docker CLI client, Kubernetes, and other developer tools that simplify working with containerized application

The Docker daemon is a background service that runs on a host machine and is responsible for managing Docker objects, such as containers, images, networks, and volumes.

Running an Nginx Image

Nginx is an open-source web server that can also serve as a reverse proxy, load balancer, and HTTP cache. Initially created as a high-performance web server.

The command I ran to start a new container was, docker run -d -p 80:80 nginx

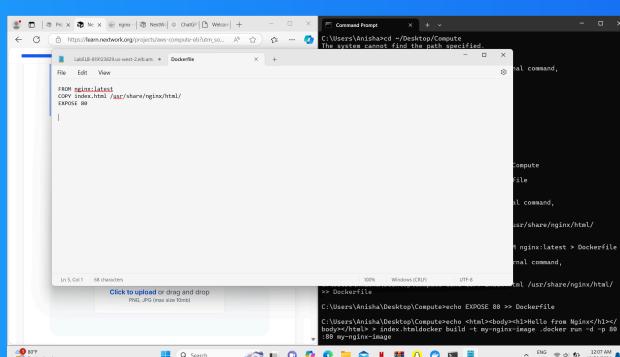


Creating a Custom Image

The Dockerfile is a document with all the instructions for building your Docker image. Docker would read a Dockerfile to understand how to set up your application's environment and which software packages it should install.

My Dockerfile tells Docker three things, FROM nginx:latest, means our image starts as a copy of the latest Nginx image, the second line replaces the default HTML file provided by Nginx with your own custom index.html file and the last line receives web

The command I used to build a custom image with my Dockerfile was docker build -t my-web-app . The '.' at the end of the command is used to indicates the current directory as the context for the Docker build.

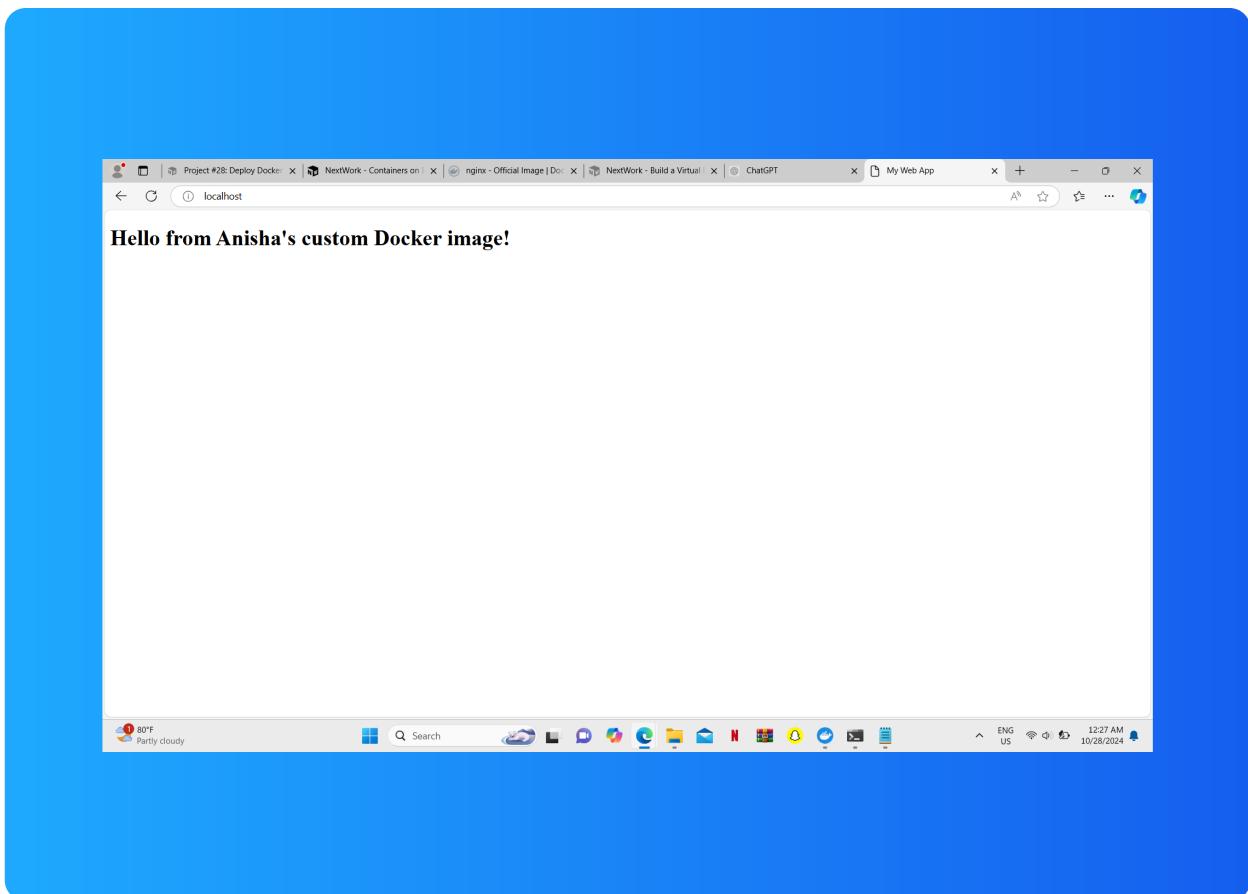




Running My Custom Image

There was an error when I ran my custom image because there was already a container using port 80, so the new container you're creating can't access it. I resolved this by stopping the container and changing its id

In this example, the container image is a static, immutable snapshot that serves as the template for creating containers. the container is a live, running instance of an image that can change over time.

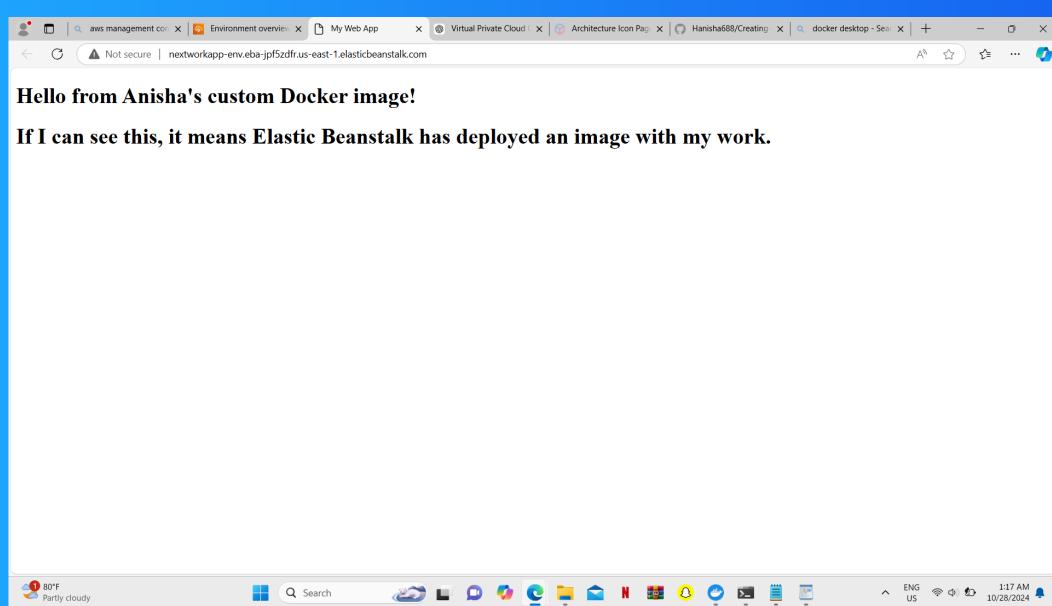




Elastic Beanstalk

Elastic Beanstalk is a PaaS offered by AWS that simplifies the deployment, management, and scaling of web applications and services.

Deploying my custom image with Elastic Beanstalk took me about an hour and 30 minutes to finish.





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