

DeerHacks - Intro to Backend

FROM ZERO TO HERO BY PRATYANK

Overview

- Cloud hosting with Linode
- Installing GFPGAN
- Setting up a firebase database
- Designing a simple backend with REST endpoints on Flask
- Brief overview of Gunicorn + Nginx

Linode

- Cloud hosting service (eg GCP, AWS, etc.)
- Free \$100 credits
- Choose the 8GB RAM plan
- ssh into the ubuntu server

GFPGAN

- What is a GAN?
 - type of artificial neural network that is used for unsupervised machine learning
 - generate new data that is similar to the training data, without explicitly being told what that data should look like.
- How do we use it?



Firebase

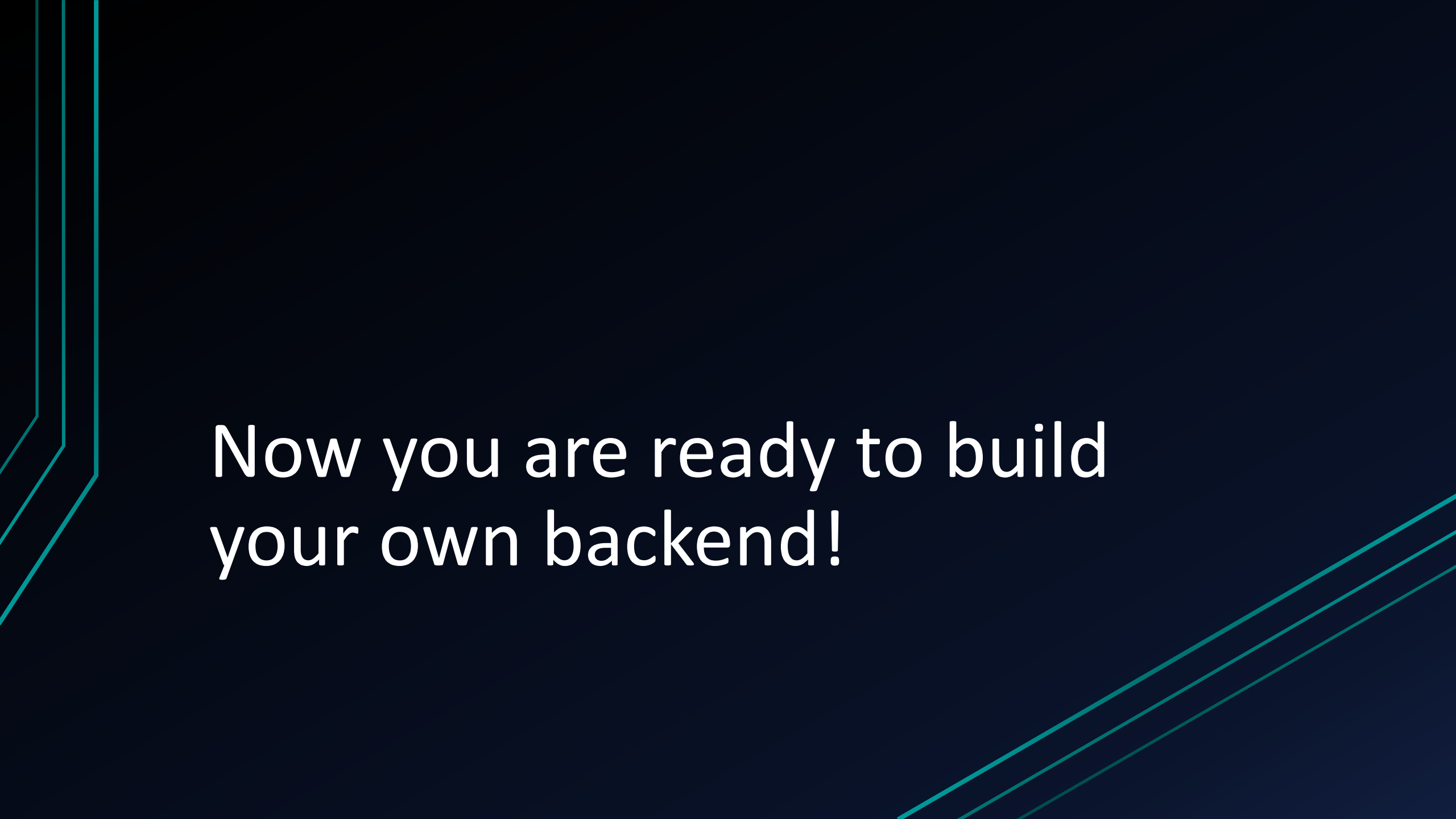
- What is Firebase?
 - Nosql database
 - Document object model (think of a document as a hash set / dictionary)
- Set up account
 - Create a project
 - Download serviceAccountKey.json
 - scp the file to the server

Backend

- What is REST?
 - REST stands for Representational State Transfer
 - Very common architectural style for building distributed systems and web-based APIs
 - Some rules: a client-server architecture, statelessness, cacheability, and a uniform interface
- What is Flask?
 - A lightweight python backend framework
- Why not Django?
 - Heavy duty and more features than necessary

Gunicorn + Nginx

- Gunicorn
 - A HTTP server
 - Creates several worker processes to handle concurrent requests
- Nginx
 - A reverse proxy
 - Forwards clients' requests to the right server
 - Hides the location and identity of the server from the client
 - Load balancer



Now you are ready to build
your own backend!