The idea with this project is to fulfill two goals :   
1. Improve my resume by showing some DevOps and Cloud Engineering skills

2. Develop a Real Estate model that delivers the best investment opportunities.

Chapter 1 :

Skills I want to showcase, and ideas to use these skills:

* **General Cloud Engineering Provider** = AWS
* **APIs** = AWS API Gateway :
  + API that returns info on housing given a zip code
  + API that returns housing price trends
  + API that returns census data
* **Backend** = DynamoDB or RDS (NoSQL by preference) :
  + Store the required backend data in a table
* **Storage** = S3 :
  + There is nothing to store that would require S3.
* **Data Engineering** = Lambda (web crawling and formatting):
  + Use Lambda functions to web crawl and format the data
* **Containerization** = Docker and ECS :
  + I am not sure how I can implement this. Maybe do another side project that focuses on containerization
* **Pipelines** = AWS CodePipeline :
  + Create a pipeline to test implement and deploy code
* **Infrastructure as Code** = Terraform / Cloudformation :
  + Have AWS resources set up and deployed using CloudFormation
* **Machine Learning / ML** = TensorFlow, Numpy :
  + Develop some ML Model to return the best investment opportunities. Should line up with Chapter 2
* **Encryption =** KMS :
  + Encrypt the data in S3
  + Encrypt the data in DynamoDB
* **Repositories** = Github :
  + Maintain code in Github

Chapter 2 :

Looking for the best real estate deals. How do we narrow it down :   
Individual listings < ZIP Codes < Cities < States

Not sure we can get access to individual listings. We need some data input

We can get census data for ZIP Codes and Cities. The trick is to format it correctly.

Variables :

* Type of investment
* Amount willing to invest.
* Type of property.
* Cost to manage
* Vacancy rate
* Property taxes
* Insurance
* Management cost
* Tenant laws

The goal being to maximize ROI