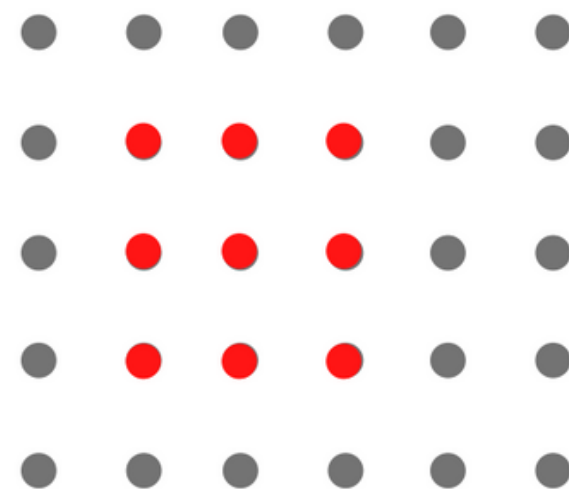




PICK.A.CHAIR



Deep learning based reverse image search

Bahar Biazar

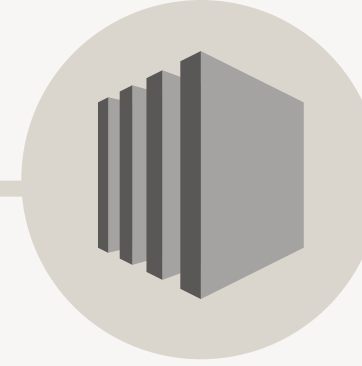
Problem and Motivation



Search Engine



AWS Deployment



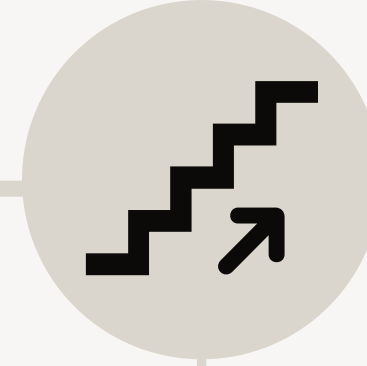
Database



Flask App



Improvement





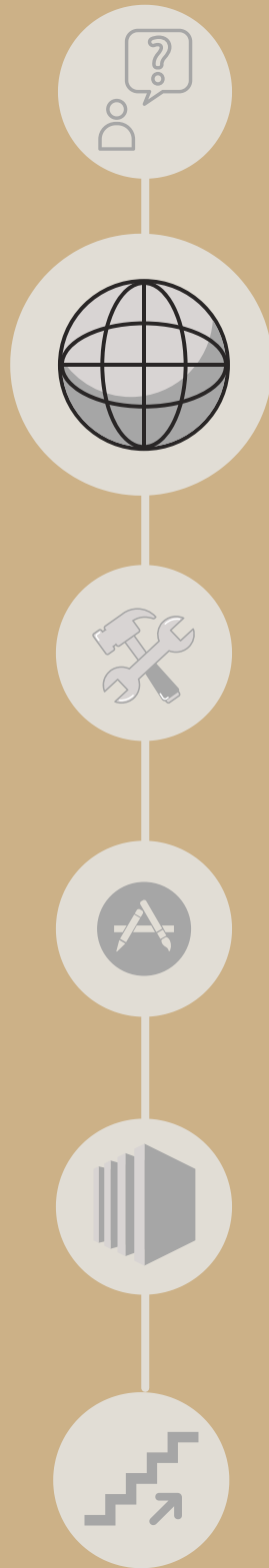
problem and motivation



- Refine Furniture Searching
- Save Time
- Save Money

database

+ 9000 images of chairs scraped from
wayfair.com inventory



search engine

Building feature extractor

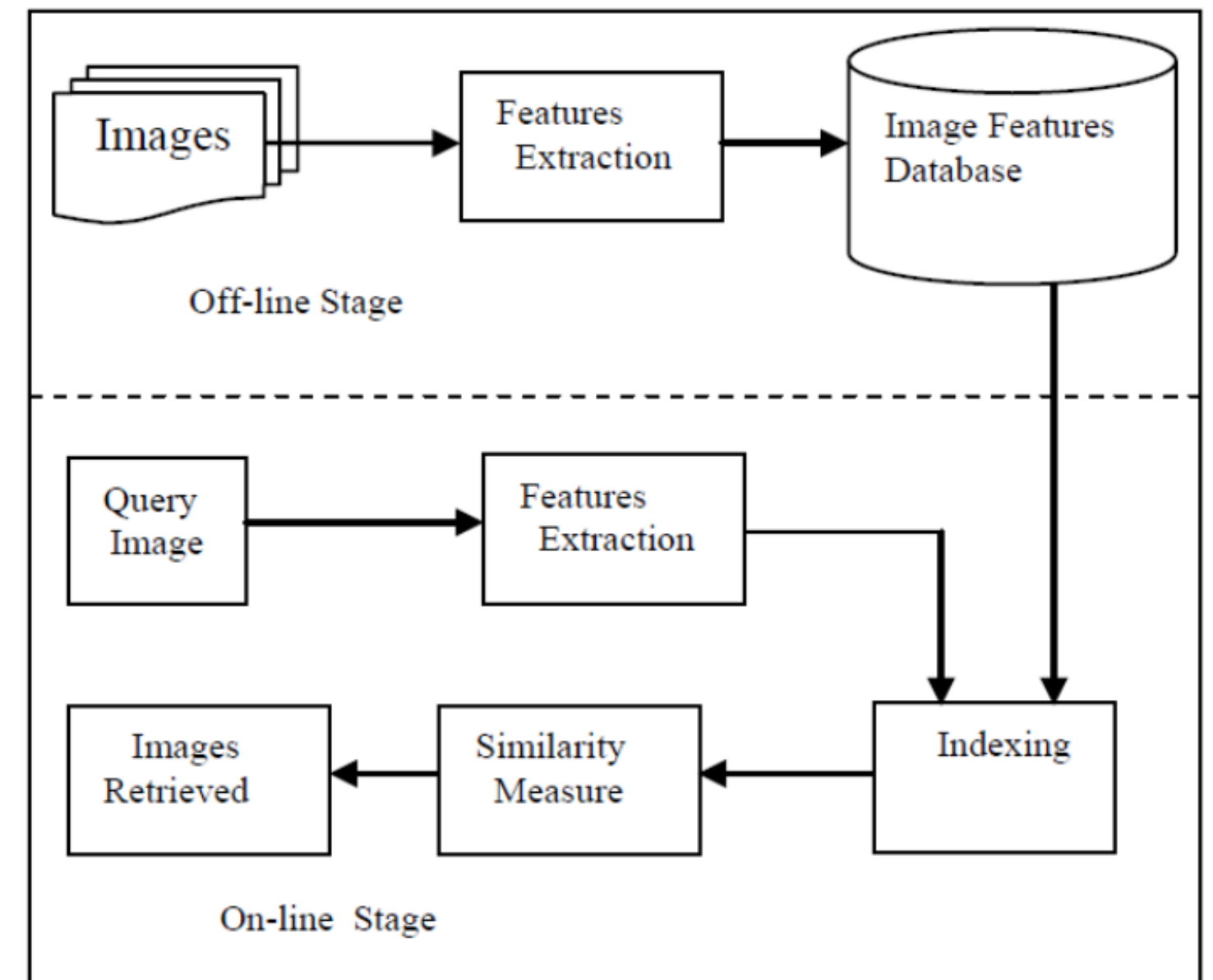
Extracting features from image database

Analyzing new target image

Calculating the similarities with all images

Retrieving the most similar results

Content-based image retrieval (CBIR):
A system for retrieving relevant images based on a given image



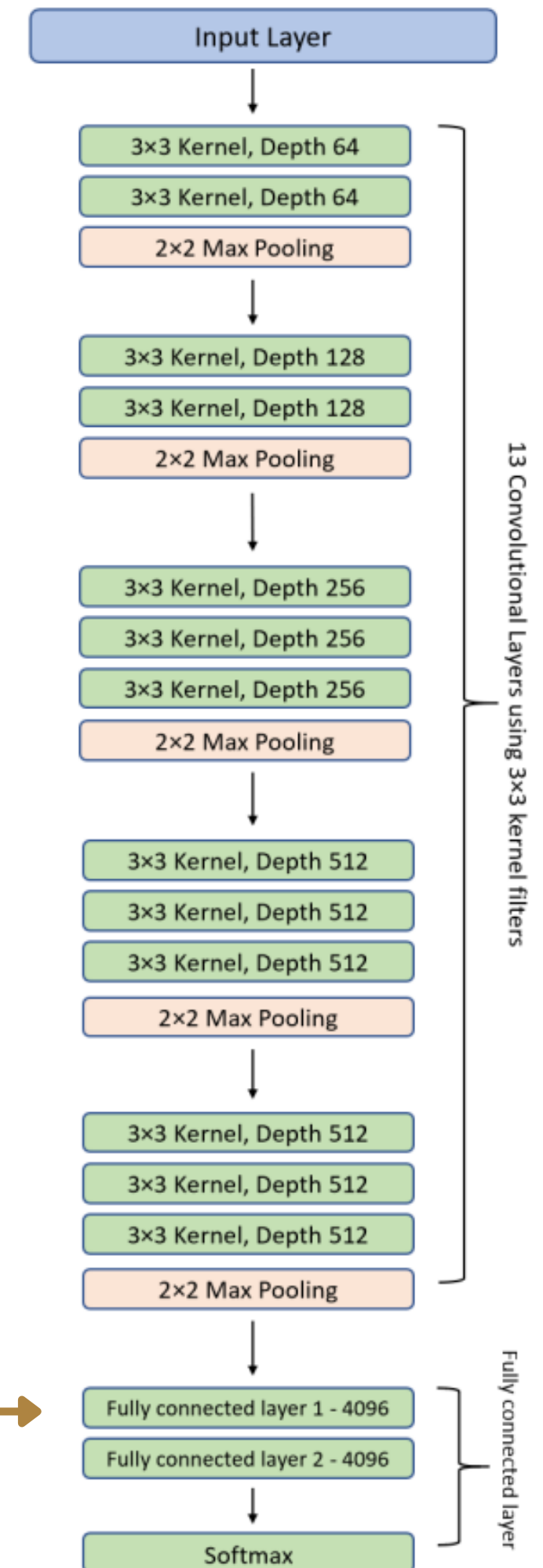
Flow of The CBIR (Alkhawlani et al. 2015)



VGG16

feature extraction algorithm
pre-trained weights from
ImageNet

output layer





query image



[restorationhardware.com](https://www.restorationhardware.com)



search results

similarity measures based on euclidean distance

0.74687153



0.7660297



0.76807666



0.7690784



0.774108



0.775662



0.7876513



0.7944767



0.8017838



0.80402946



0.8042707



0.8046355



0.8095541



0.8121082



0.8127608



0.8144065



0.8155597



0.8158355



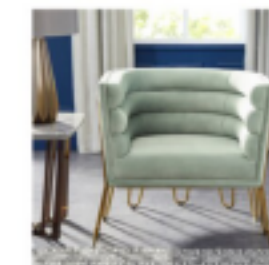
0.8159123



0.8167631



0.81748885



0.8200306



0.8221077



0.82222444

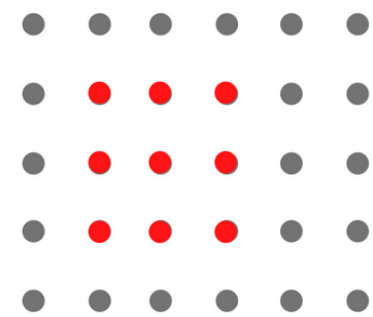


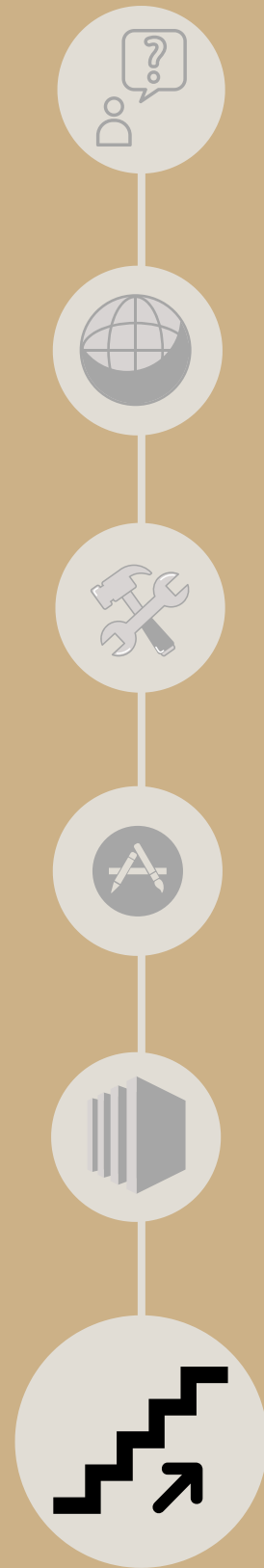


web app

<http://50.18.139.230:5000>

PICK.A.CHAIR





next steps

- Expand the database
- Update the database regularly
- Try other feature extraction algorithms

get in touch



baharbiazar@gmail.com



linkedin.com/in/bahar-biazar



github.com/baharbiazar