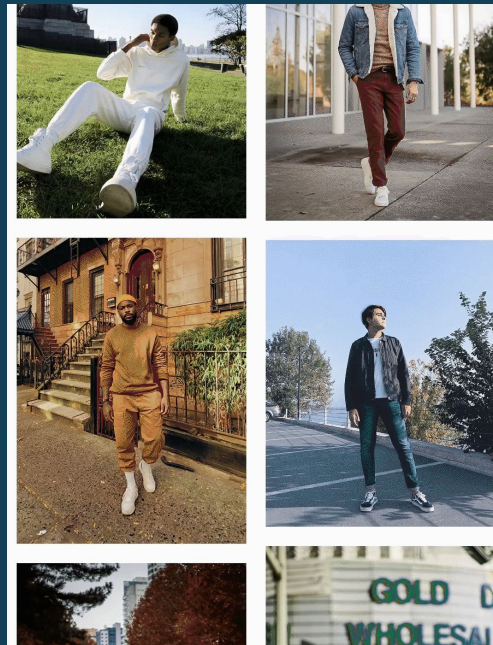




Improve Search Performance

Nao Kawakami GA Jan 2021



Outline

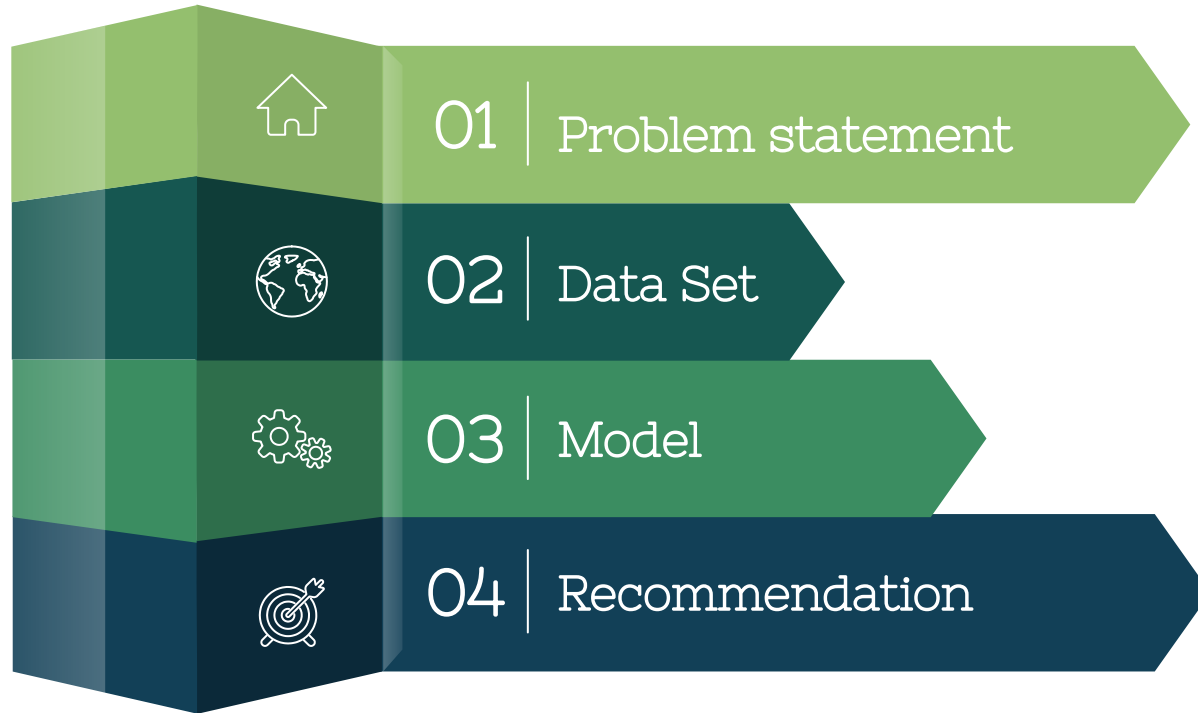


Diagram featured by <http://slidemodel.com>

Problem statement

Use an image to search, not key words





Data set



The Cathedral Church of St. John the Divine

Catedral Metropolitana Nossa Senhora Aparecida

Patrick's Cathedral

Catedral de La Plata

Cathedral Basilica of the Sacred Heart

Cathédrale Notre-Dame de Chartres

Cattedrale di Santa Maria del Fiore

Kölner Dom

St. Paul's Cathedral

Patriarchal Cathedral ST. Alexander Nevsky



Data set

- Similarity
 - Angle, distance
- RGB
 - Filter out Gray, RGBA
- Same shape
 - $(1200, 800, 4) \rightarrow (256, 256, 3)$



Cathédrale Notre-Dame de Chartres



Data set

Similarity



Data set

Color Scale

Shape

RGB α

(1200, 450, 4)

RGB

(428, 678, 3)

Gray

(564, 680, 1)





Data set

| Image | Color Scale | Height | Width | Shape | |
|-------------|--------------|--------|-------|--------|---------------|
| NotreDame_1 | RGB α | 566 | 728 | Remove | |
| NotreDame_2 | RGB | 780 | 1100 | --> | (256, 256, 3) |
| NotreDame_3 | P | 1200 | 728 | Remove | |
| NotreDame_4 | RGB | 875 | 511 | --> | (256, 256, 3) |

Model

Convolutional
Neural Network
with Keras Sequential

90 % accuracy



Provide image url

Image URL

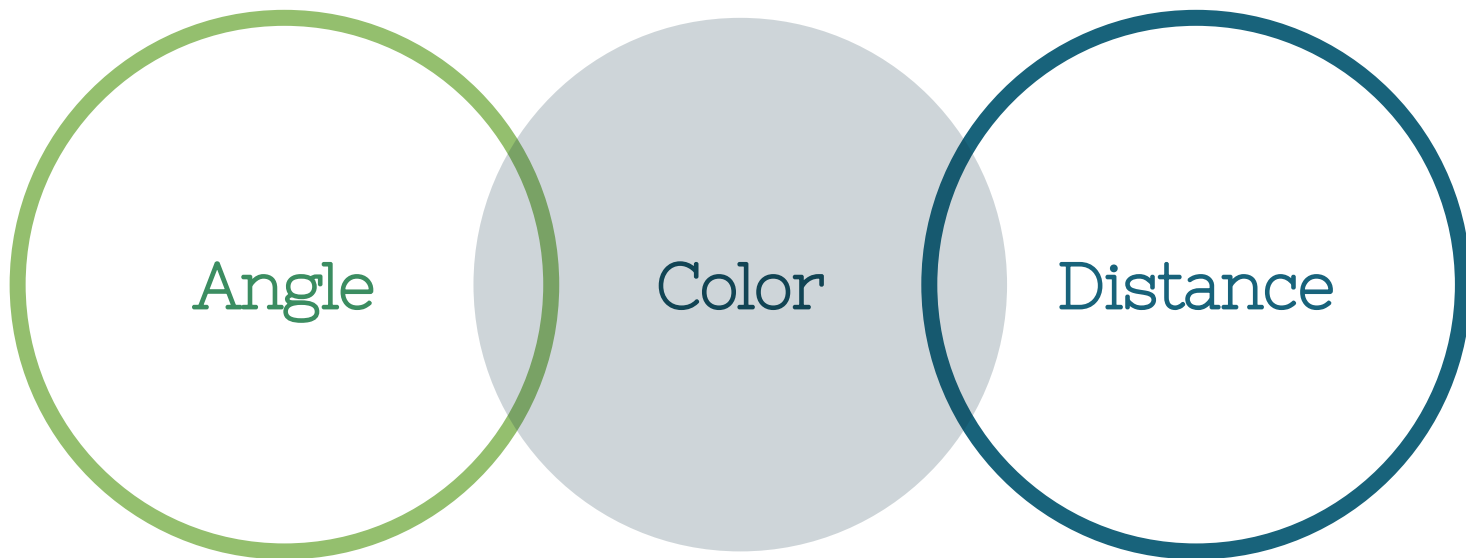
https://github.com/noah992/Capstone/blob/main/image/demonstration_02.JPG?raw=true

READ IMAGE

© Untitled. Design: TEMPLATED. Images: Unsplash.



Next step





Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Photographs by Unsplash
- Demo: Amazon, Google Map

THANKS!

Any questions?