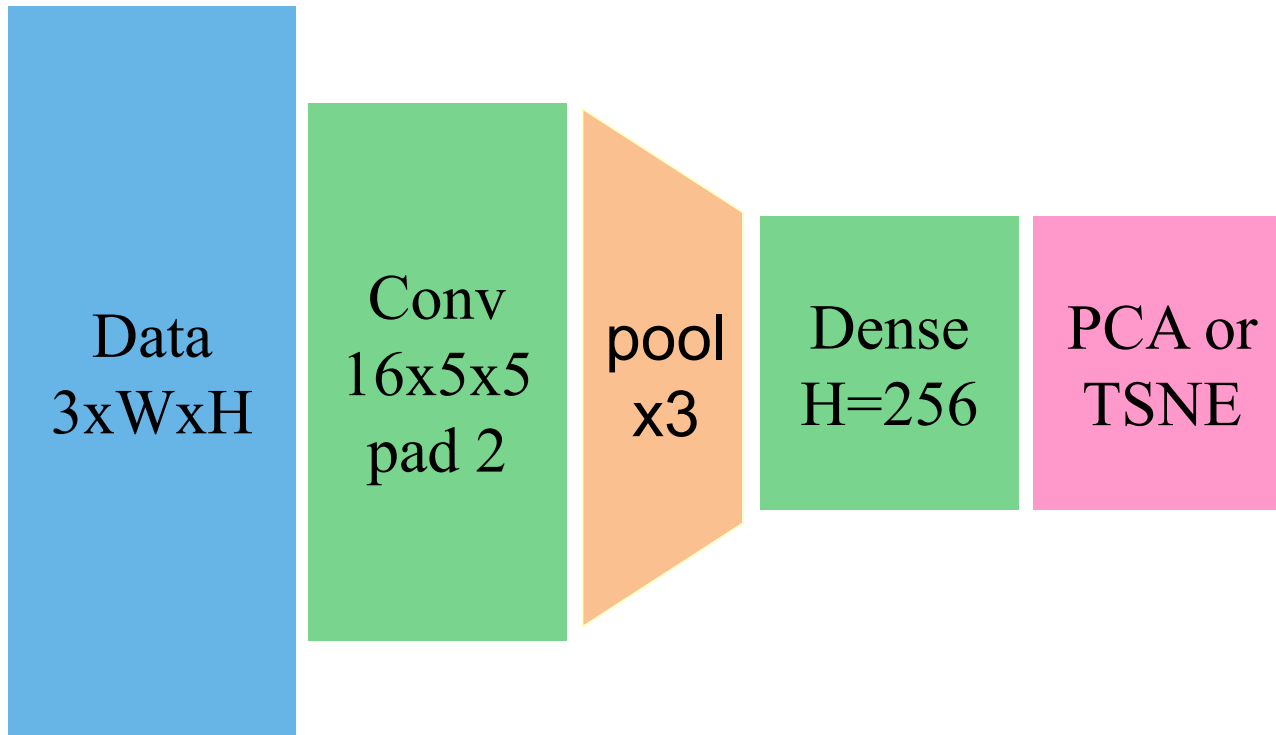


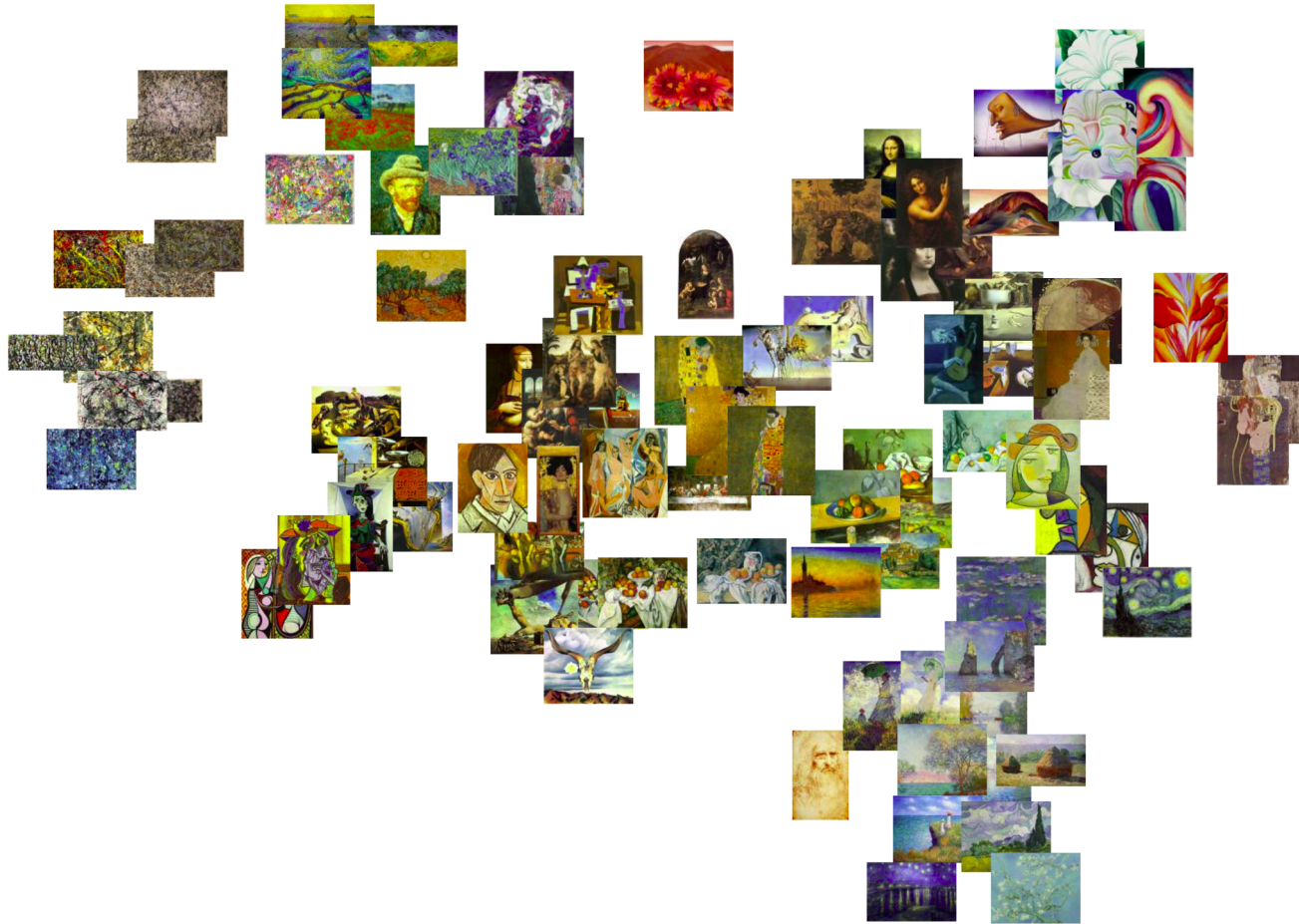
Exploratory data analysis

Visualize data in hidden space



Exploratory data analysis

Visualize data in hidden space



Razi Shaban, <https://razi.xyz/vgg2vec/picasso>

Why do we ever need that?

- Compress data
 - $|\text{code}| \ll |\text{data}|$
- Dimensionality reduction
 - Before feeding data to your XGBoost
- Learn some great features!
 - Before feeding data to your XGBoost
- Unsupervised pretraining
 - Large amounts of unlabeled data
- **Generate new data!**

Image morphing with AE

Idea:

If $\text{Enc}(\text{image1}) = c1$

$\text{Enc}(\text{image2}) = c2$

Then

maybe $(c1+c2)/2$ is a
semantic average of the two
images

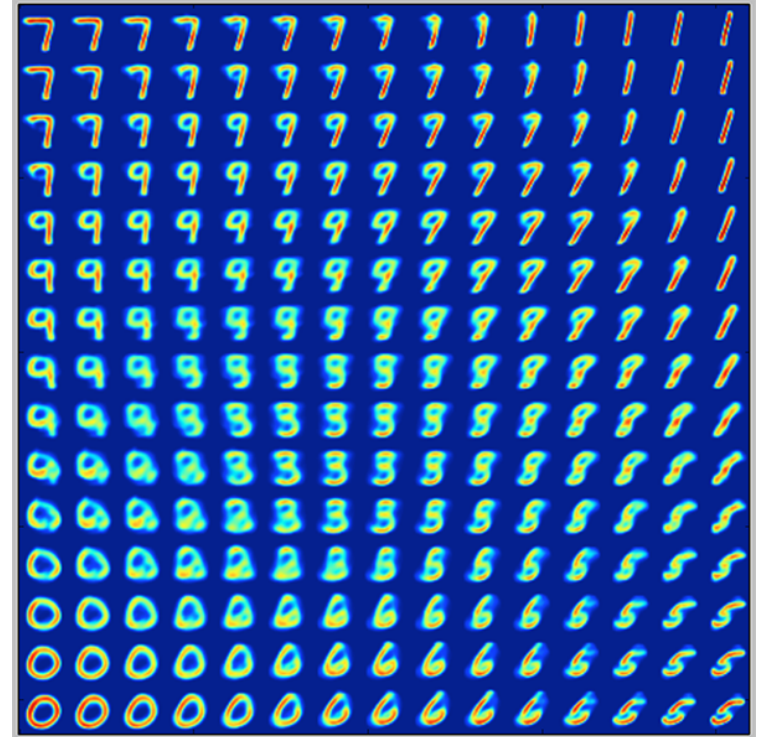


Image morphing with AE

Idea:

- Look for a common direction vector for “add mustache” or “add age” changes.
- Apply to new images

Image morphing with AE

