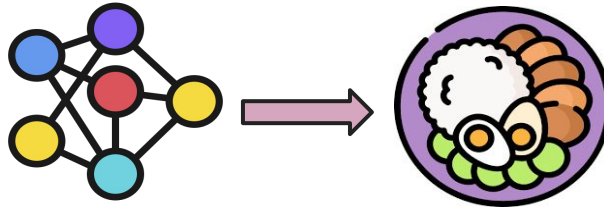


# AI-SYNTHETIC DISH



## IMAGES



### Students:

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# MOTIVATION

- In recent years, AI-generative synthetic images has reached such high quality that humans can hardly distinguish them from real pictures. As students, we found very interesting to review current literature and proposed innovations of GANs to achieve such results.
- We selected AI-synthetic dish images as focus of our study. The motivation behind that is to propose a cheaper alternative for food service advertisement.



# CURRENT STATUS

- Dataset exploration
- Papers studied
- Networks tested

# DATASETS

- Food 101
  - Mostly good quality images, some of poorer quality
  - Many different kinds of food might make training harder
    - Less images of a given food
- ChineseFoodNet
  - Webpage leads to a dead link, owners did not respond

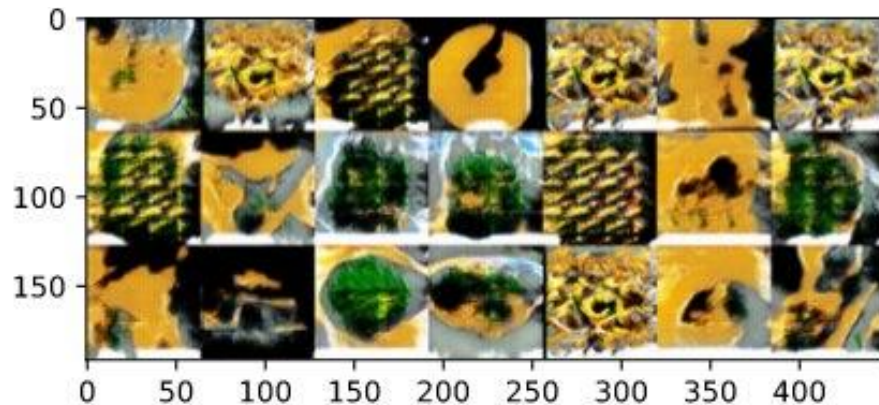
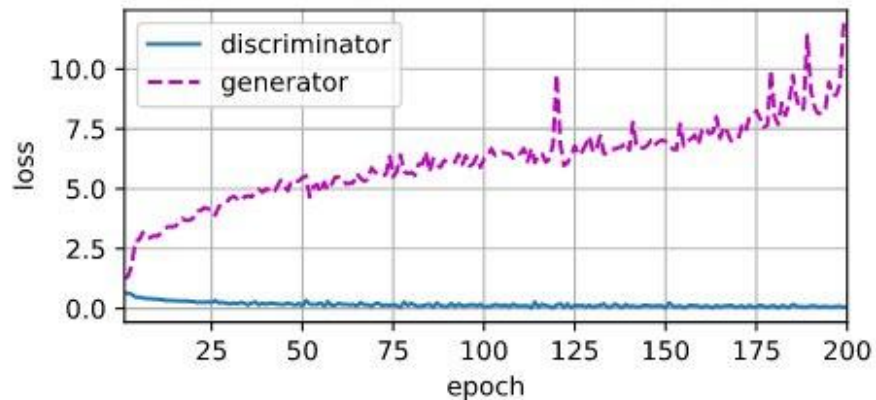
# PAPERS STUDIED

- Easier to find research on classification rather than generation

# NETWORKS TESTED

- Problems with discriminator being much more powerful than generator

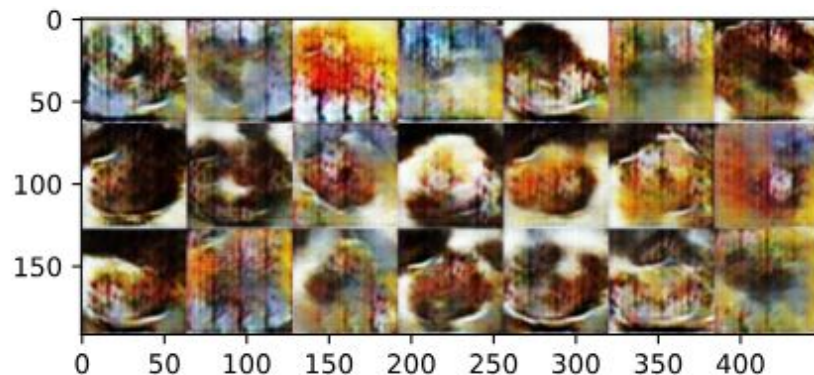
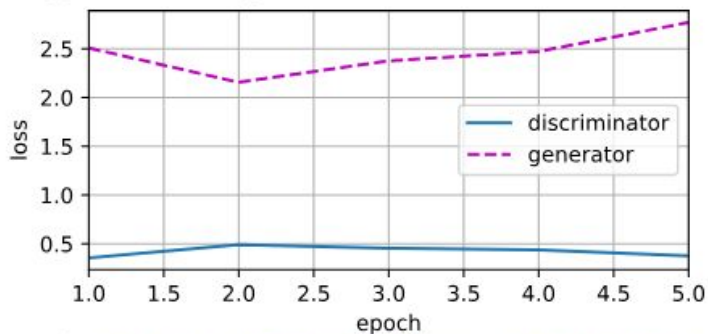
loss\_D 0.071, loss\_G 11.869, 1184.9 examples/sec on cuda:



# NETWORKS TESTED

- Although discriminator was not so as better as the generator, images still looked strange

⇒ loss\_D 0.374, loss\_G 2.770, 297.5 examples/sec on cuda:0



# NETWORKS TESTED

- The configuration here was with a latent dimension value of 100, learning of 0.0003 and 15 epochs.

loss\_D 0.349, loss\_G 2.325, 82.3 examples/sec on cpu

