Deep Dream

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Deep Dream

- Idea: want to exaggerate details in the image that look a little bit like recognizable objects

- Overview
  - Pick a layer in the ConvNet
  - It will have some neurons that are highly activated
  - There is a trade-off here: we can't make *all* of them be even more highly activated simultaneously
  - Idea: make the rich get richer. Change the input x with the most highly activated neurons influencing the change in the input the most

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- Set the gradient at the layer that we picked to be *equal to the activation at that layer*
  - A hack: this is not the gradient at all
- Backpropagate the gradient to figure out how much to change the input
- Repeat

- Result: a feedback loop where the image looks more and more like the objects that were kind of detected at first
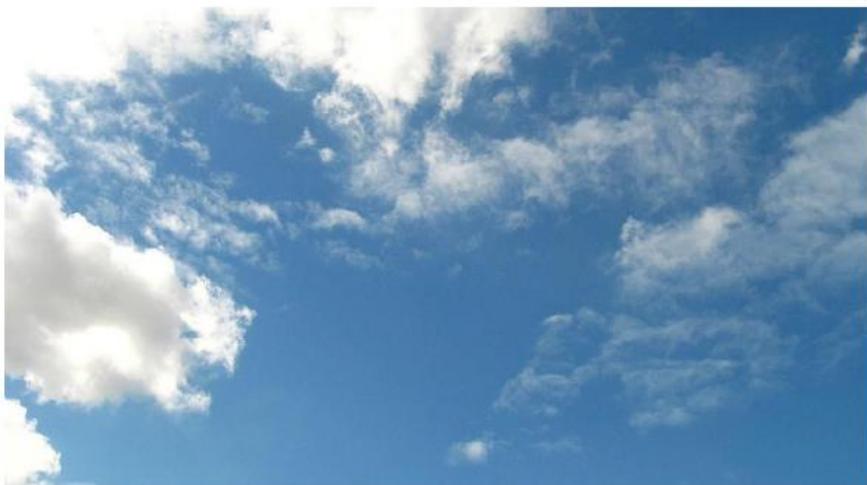
"Admiral Dog!"   "The Pig-Snail"   "The Camel-Bird"   "The Dog-Fish"