Summary
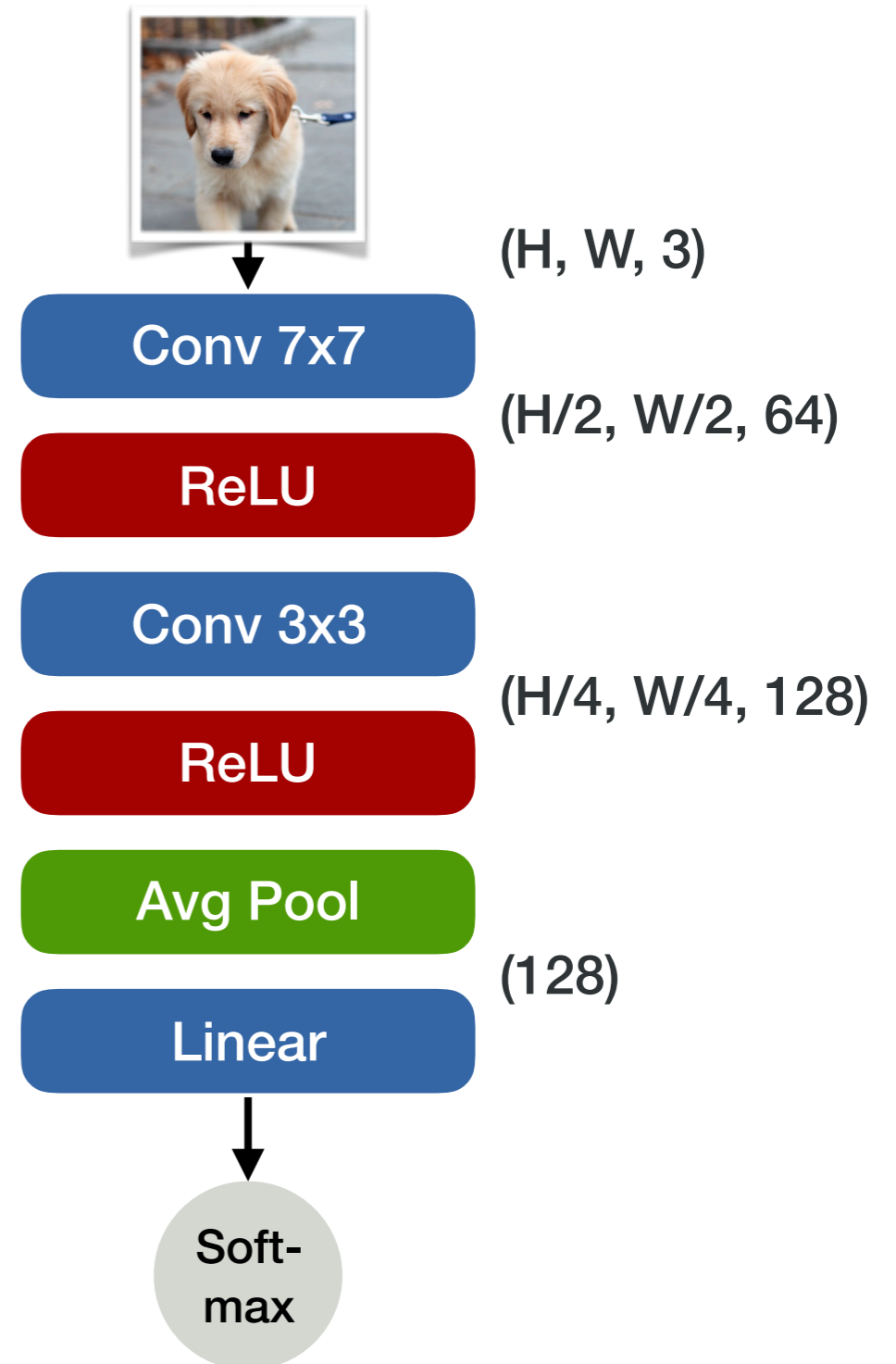
Convolutional networks

- Linear transformations

  - Convolutions

- Convolutional non-linearities

  - Pooling
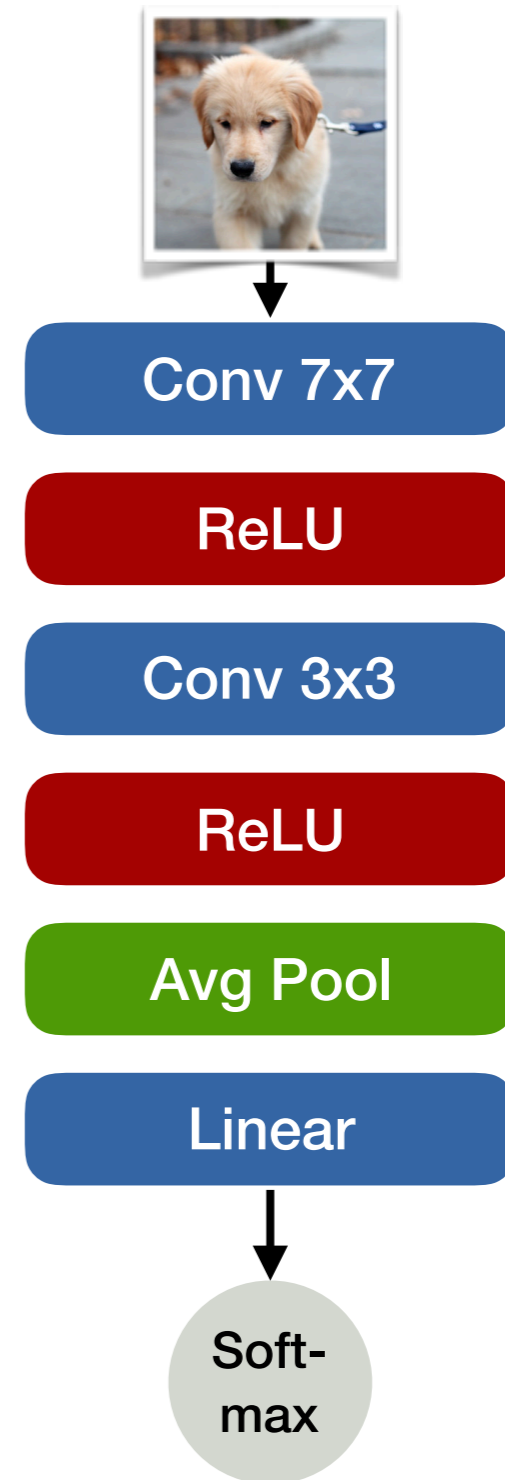
ConvNet Design

- Stride and increase channels

- Small kernel size

- All convolutional

- Up-convolution close to output (optional)

(H, W, 3)

Conv 7x7

(H/2, W/2, 64)

ReLU

Conv 3x3

(H/4, W/4, 128)

ReLU

Avg Pool

(128)

Linear

Soft-max

Applications of ConvNets

- Autonomous vehicles

- Analyze medical images

- Geoscience: Analyze scans of rock formations to find oil