Module 2: Building Blocks for Image Recognition

Video 4 : AlexNet

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AlexNet

- Designed by Alex Krizhevsky, Ilya Sutskever, and Geoffrey Hinton in 2012

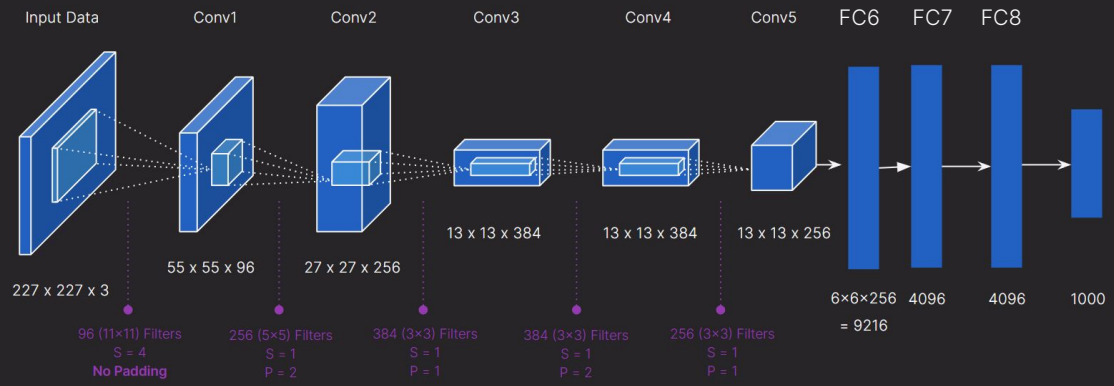
Alex Krizhevsky

Ilya Sutskever

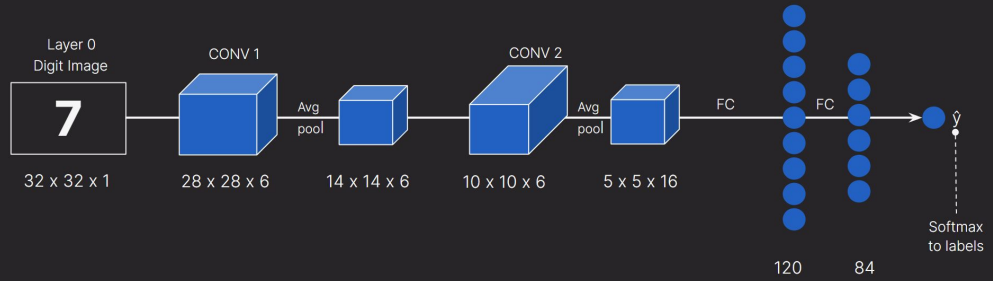
Geoffrey Hinton

AlexNet

AlexNet

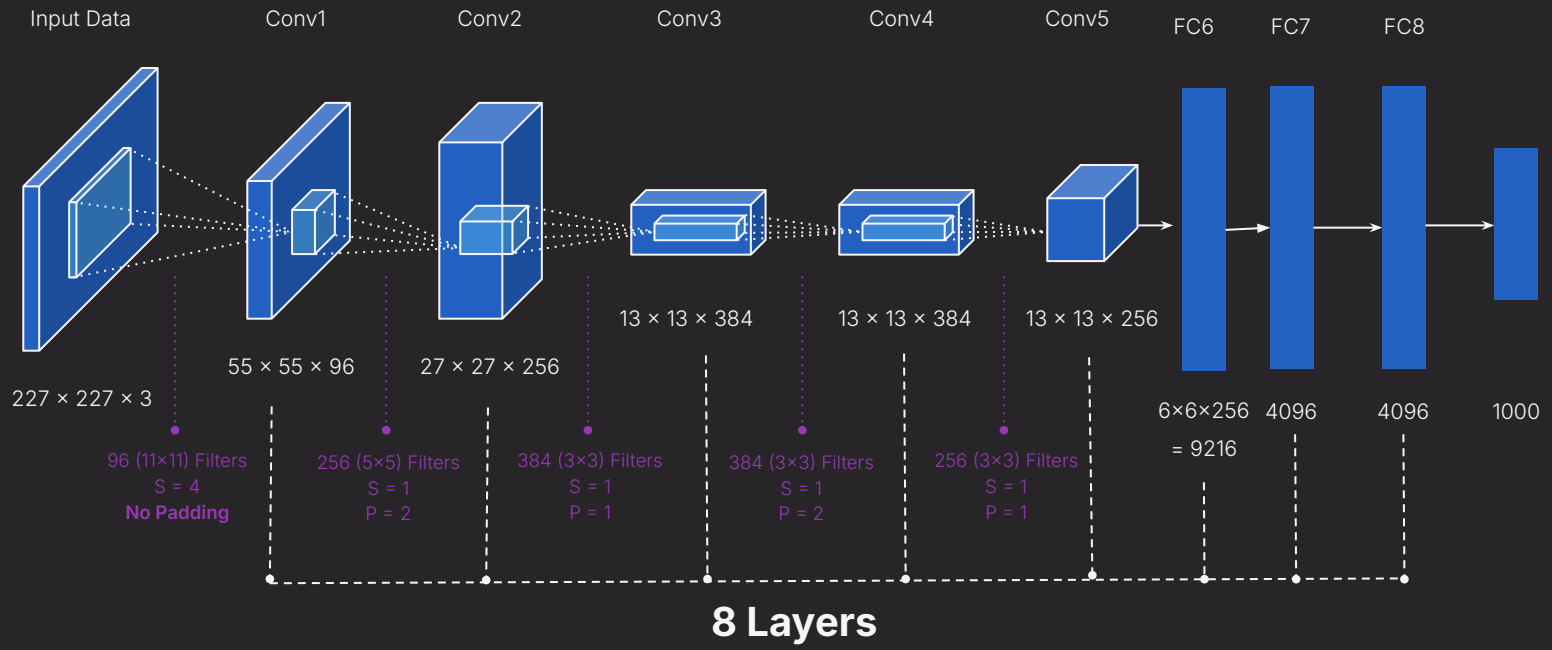


LeNet 5



AlexNet

- Leverages deeper architecture with **8 layers**.



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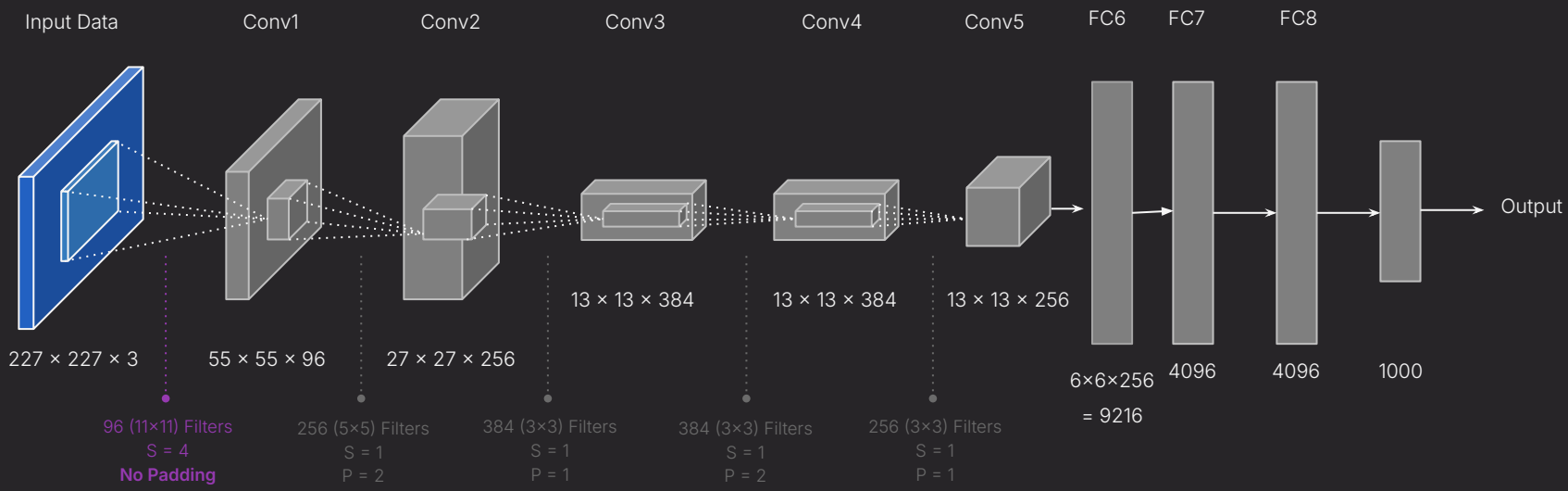
AlexNet

- Process **227 × 227** pixel images in full RGB color.



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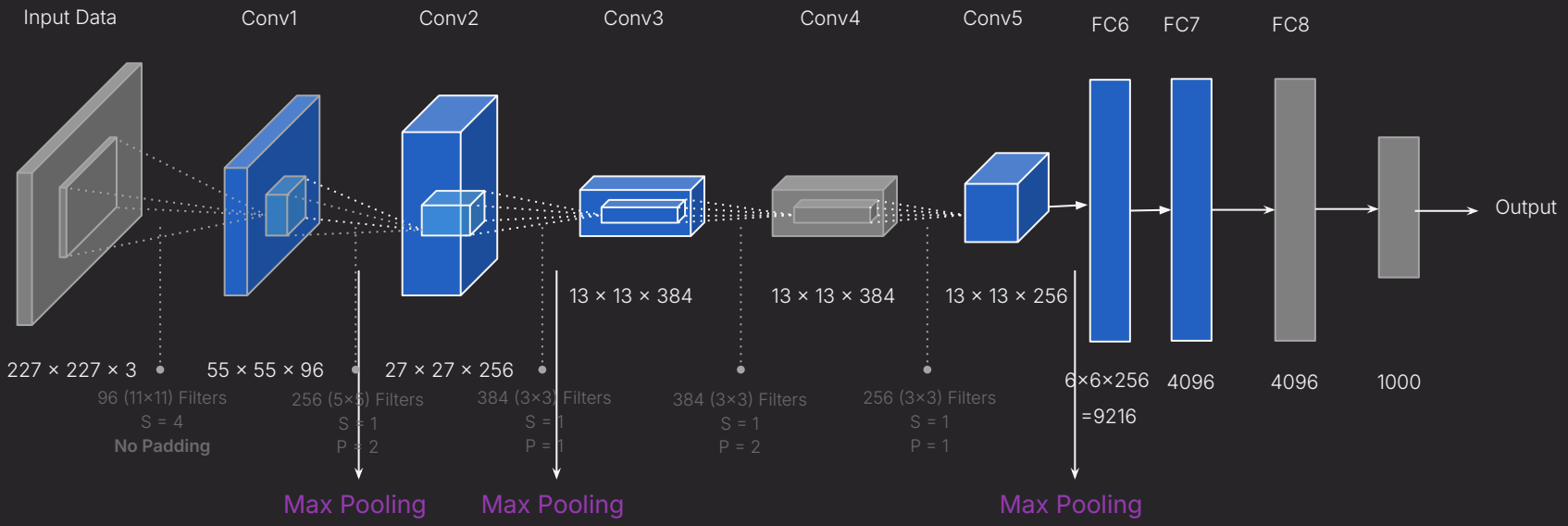
AlexNet: Distinct Features

- Uses max pooling for preserving features better.



AV Luminary Awards

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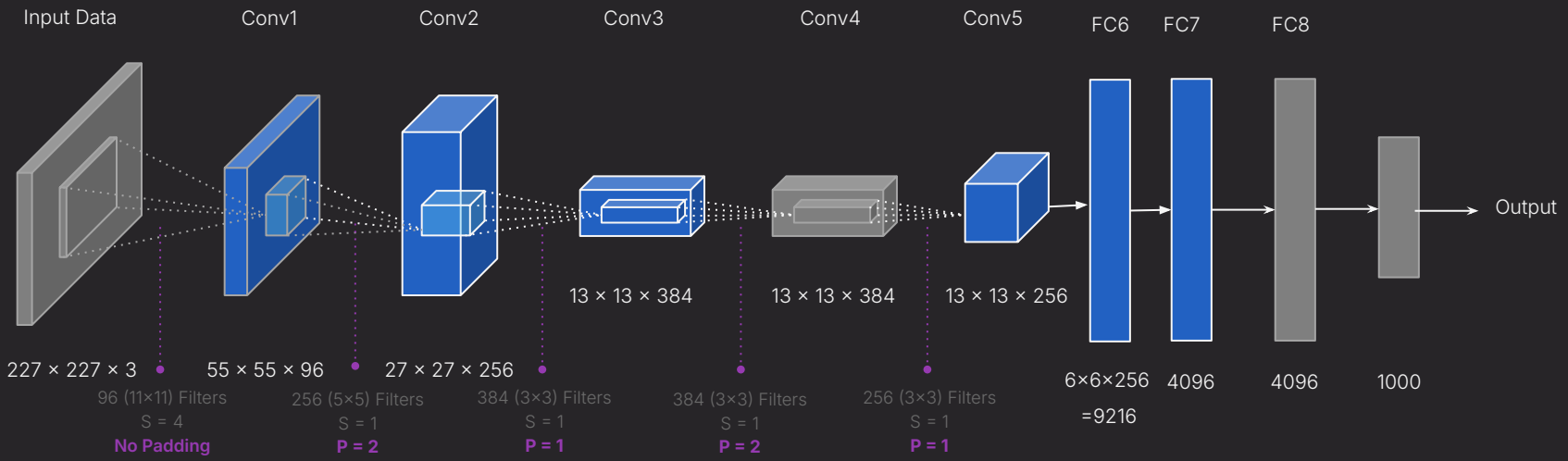
AlexNet: Distinct Features

- Uses max pooling for preserving features better.



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AlexNet: Distinct Features

- **ReLU Activation:** Used ReLU compared to tanh and sigmoid used in LeNet.
- **Dropout:** Randomly drops 50% of neurons in FC layers during training to reduce overfitting.
- **Advent of GPUs:** Exploited multiple GPUs for training, reducing computational time.

Won the 2012 ImageNet challenge.

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After Hands on

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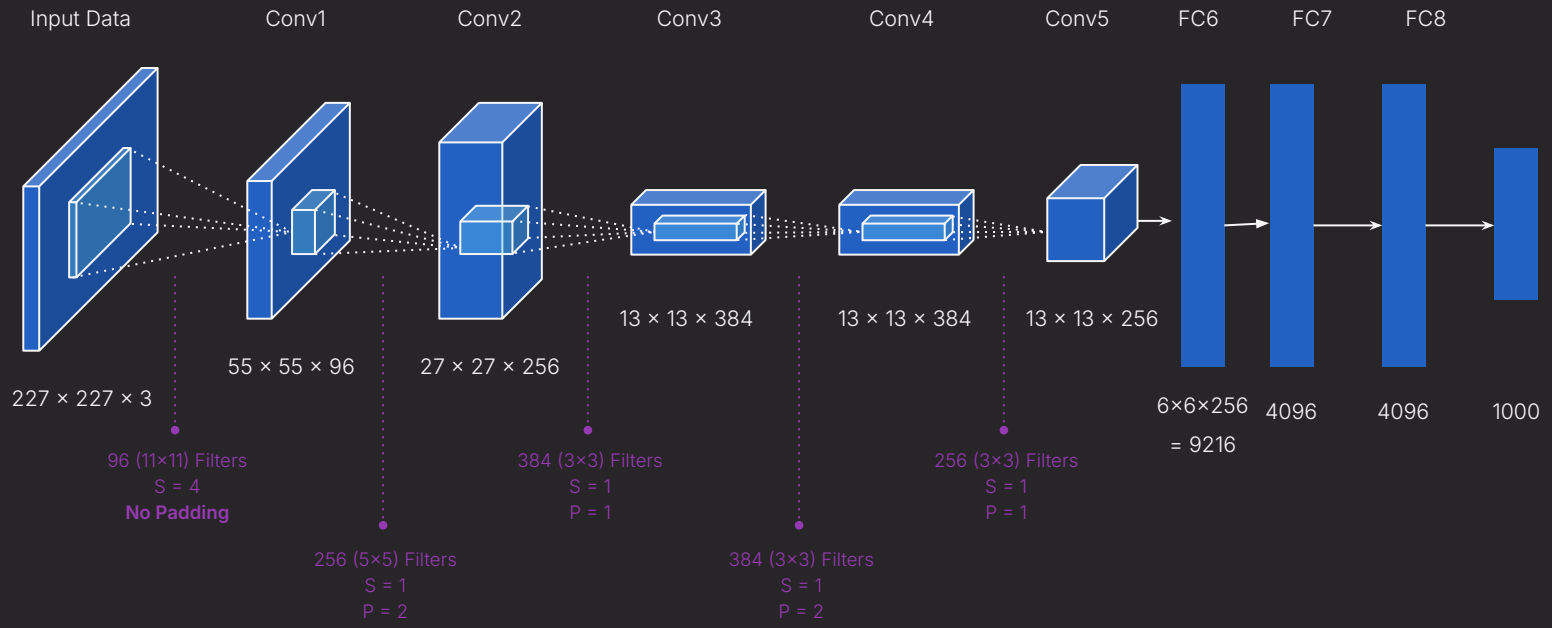
AlexNet Reference Image (Do not delete)



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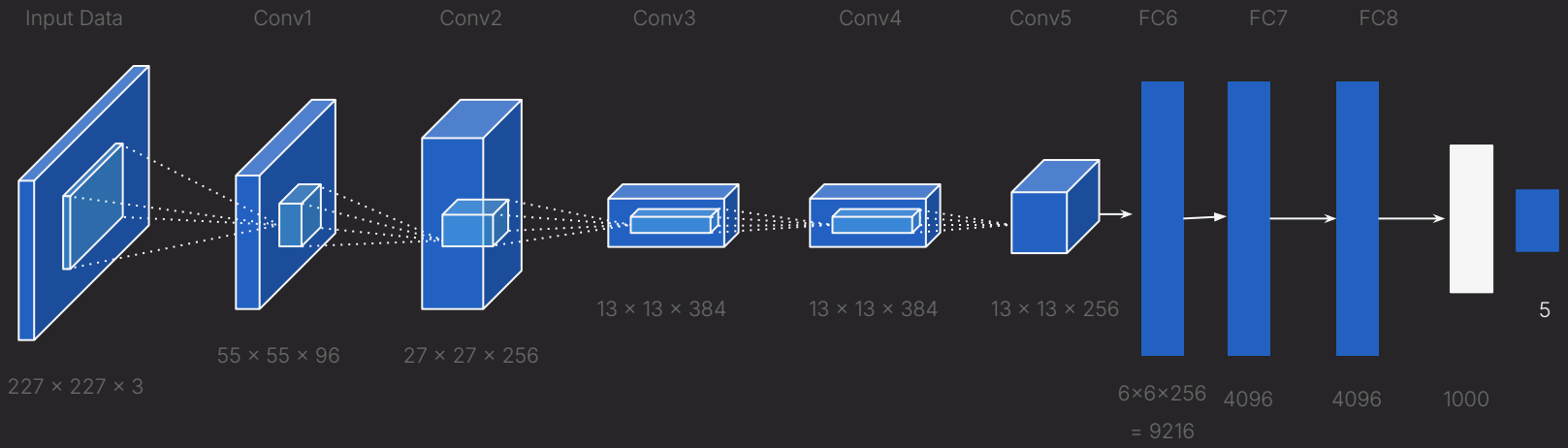
AlexNet Reference Image (Do not delete)



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AlexNet Reference Image (Do not delete)