

# Convolutional Neural Networks

Week 3: Advanced Deep Learning

TuneParams.ai - FAAI Course

Topics Covered:

- Convolution operation and filters
- Pooling layers and dimensionality reduction
- CNN architectures (LeNet, AlexNet, VGG)
- Transfer learning and pre-trained models
- Applications in computer vision

Practical Lab:

- Build an image classifier using PyTorch
- Work with real image datasets
- Implement data augmentation techniques
- Evaluate model performance

Next Week Preview:

Introduction to Natural Language Processing