#### Deep Learning: Modern Artificial Vision

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#### Preface

This is the preface of the document...

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# $\begin{array}{c} {\rm Part} \ {\rm I} \\ {\rm Introduction} \end{array}$

#### Introduction

#### Deep Learnining

#### Optimization

**Datasets** 

#### Introduction to CNNs

5.1 Image Classification

#### Model evaluation

# Part II State of the Art Implementations

### Classic architectures of CNNs

- 7.1 FPNs
- **7.2** PANs
- 7.3 Deformable Convolutions

### Classic architectures for Image Segmentation

- 8.1 U-Net
- 8.2 U2-Net

#### Vision Transformers

- 9.1 DETR
- 9.2 Deformable-DETR
- 9.3 CO-DETR

Bounding-box Object detection

Semantic Segmentation

Density Maps

## Part III Generative Models

#### **Difussion Models**

#### 13.1 Stable Difussion

### Text to Image Difussion Models

### Layout to Image Difussion Models

GANs

Style Transfer