

# 学習

## Learning algorithm

教師あり学習 supervised

教師なし学習 unsupervised

回帰 regression

分類 classification

強化学習 RL

生成 generative

## アーキテクチャ Architecture

Neural network  
 $y = \sigma(Wx + b)$

決定木

SVM

画像  
image

物体検出

- R-CNN[1]
- YOLO[2]
- SSD[3]
- DETR[4]

画像・シーン識別

- AlexNet[10]
- VGGNet[11]
- ResNet[12]

VAE[13]

Flow-base

- 正規化Flow  
NICE[19], CNF[20],  
Flow matching[21]
- 拡散モデル[22][23][34]
- 正規化 + 拡散 DiffFlow[25]

Semantic  
segmentation

- UNet[5]
- SegNet[6]
- DeepLab[7]

DQN[26]

方策勾配法 policy gradient

- モンテカルロ木探索  
REINFORCE[27]
- Actor-critic  
A2C[28]
- CFR[29]
- AlphaZero[30]

GAN[14]

- DCGAN[15]
- Pix2pix[16]
- CycleGAN[17]
- StyleGAN[18]

CNN

ViT[38]

GNN

- GCN[30]
- GAT[40]

RNN

Transformer[37]

方策  
policy

模倣学習 behavior cloning

- Implicit BC[8]
- GAIL[9]

時系列予測

評価

Evaluation

解釈 interpretability

- LIME[41]
- SHAP[42]

軽量化

- LoRA[43]

汎化性 generalizability

- Multi-modal学習([33])  
CLIP[32]
- 転移学習([34])
- Fine tuning  
few-shot learning[35]

時系列  
time series

逆強化学習

- AIRL[31]

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