

1. 神經網路的結構(基礎知識,常見種類、優缺點) :
 - Layers
 - Loss
 - Activations
 - Architectures (LSTM, CNN, Resnet, MobileNet, etc.)
 - Transfer learning
 - Attention
 - Regularization
 - Autoencoder
2. **Optimization** :
 - Backpropagation
 - Gradient descent
 - 常見用於深度學習的 optimizer
3. 資料處理 :
 - Normalization
 - data augmentation
 - imbalance data problem
4. 實作工具 :
 - Programming Language Basics (Python)
 - numpy, scipy
 - Deep learning framework(TensorFlow or PyTorch)
5. 機器學習基本概念 :
 - 機器學習任務及分類
 - 資料集及其處理方式
 - Generalization and overfitting
 - 常見機器學習方法
 - 大型語言模型LLM，如 ChatGPT、Google Bard 等
6. Image processing basics. For examples, convolutions, Sobel operators, and Hough transform.
7. Medical imaging and AI.
8. Explain your research – what are the problems and applications, and the advantages of your approaches against other methods, etc.