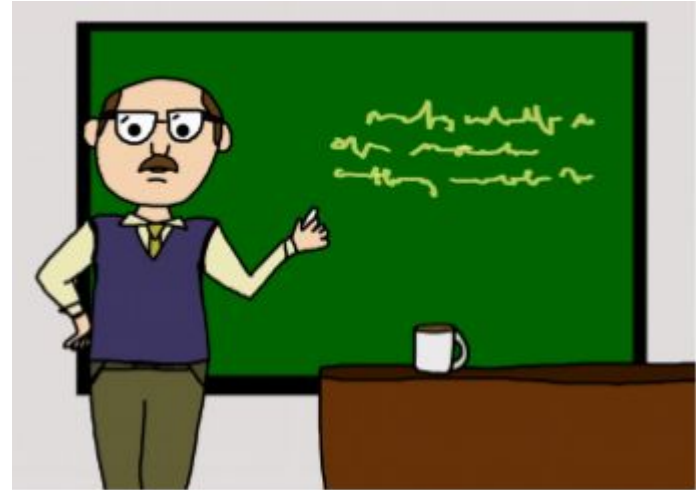


# Introduction to Transfer Learning

# Different ways to achieve knowledge in the real world

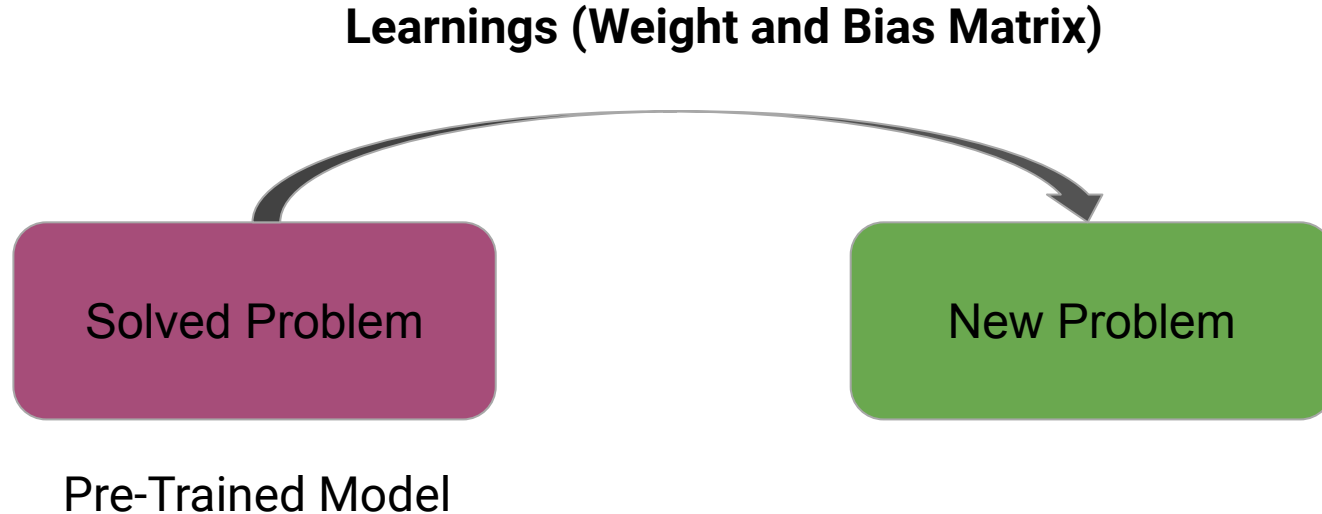


Learning from Scratch



Learning from Experts

# Technical definition of Transfer Learning



# How to choose right pre-trained model for our classification problem?

**BERT**

**VGG16 trained  
on ImageNet**

**ULMFiT**

**VGG16 trained  
on MNIST**

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# Steps for Creating an Emergency vs Non-Emergency Classifier using transfer learning

## Training Part

1. Import necessary libraries
2. Loading the dataset
3. Pre-Process data
4. Load weights of pre-trained model
5. Fine tune the model for the current problem
6. Validate if it works fine, iterate again if it does not

## Prediction

1. Get predictions on new data

# Different ways of Fine Tuning the model

1. Feature Extraction
2. Using the Architecture of the pre-trained model
3. Train some layers while freeze others