

# INTRODUCTION ON MY CURRENT RESEARCH INTEREST

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2/14/2024

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# BIOGRAPHY

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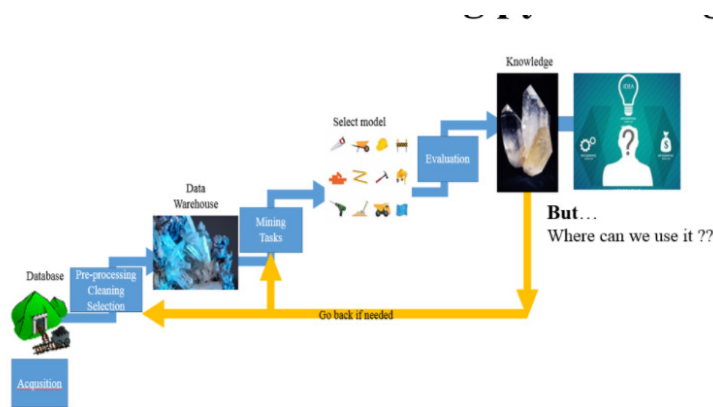
### 學經歷

- EE, University of Michigan, Ann Arbor, PhD 2010
- EE, University of Michigan, Ann Arbor, MS 2007
- EE, National Chiao-Tung University, Taiwan, BS 2005

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# CURRENT RESEARCH INTEREST

## □ Data Mining and Machine Intelligence



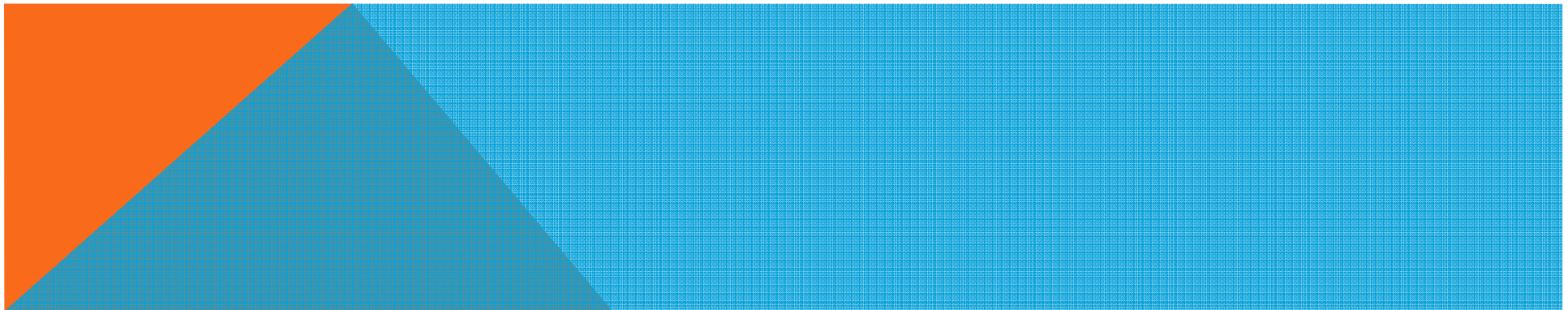
## □ Web Service and Technologies



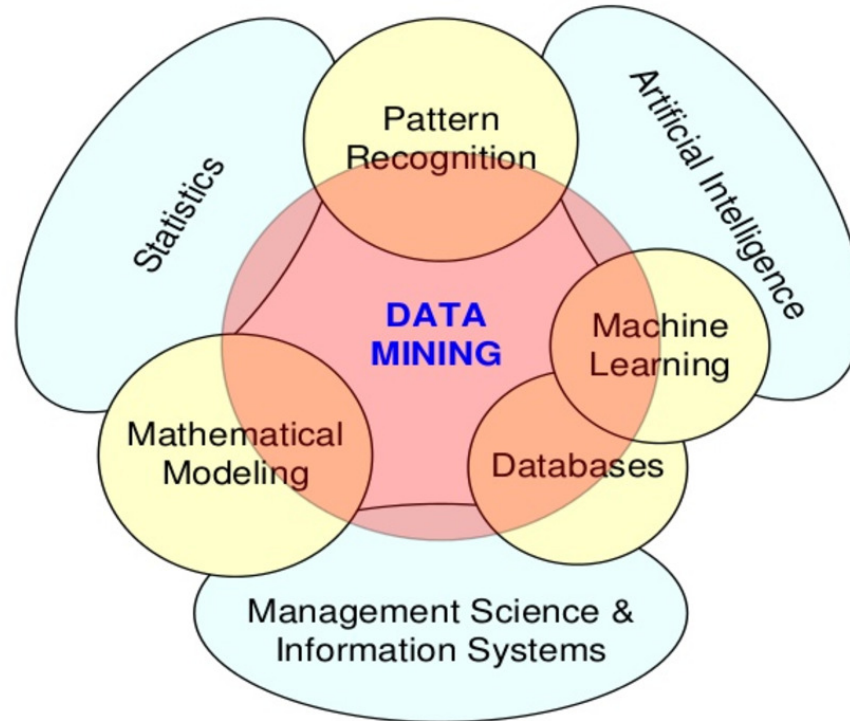
, etc.

# WHAT IS DATA MINING(DM) ?

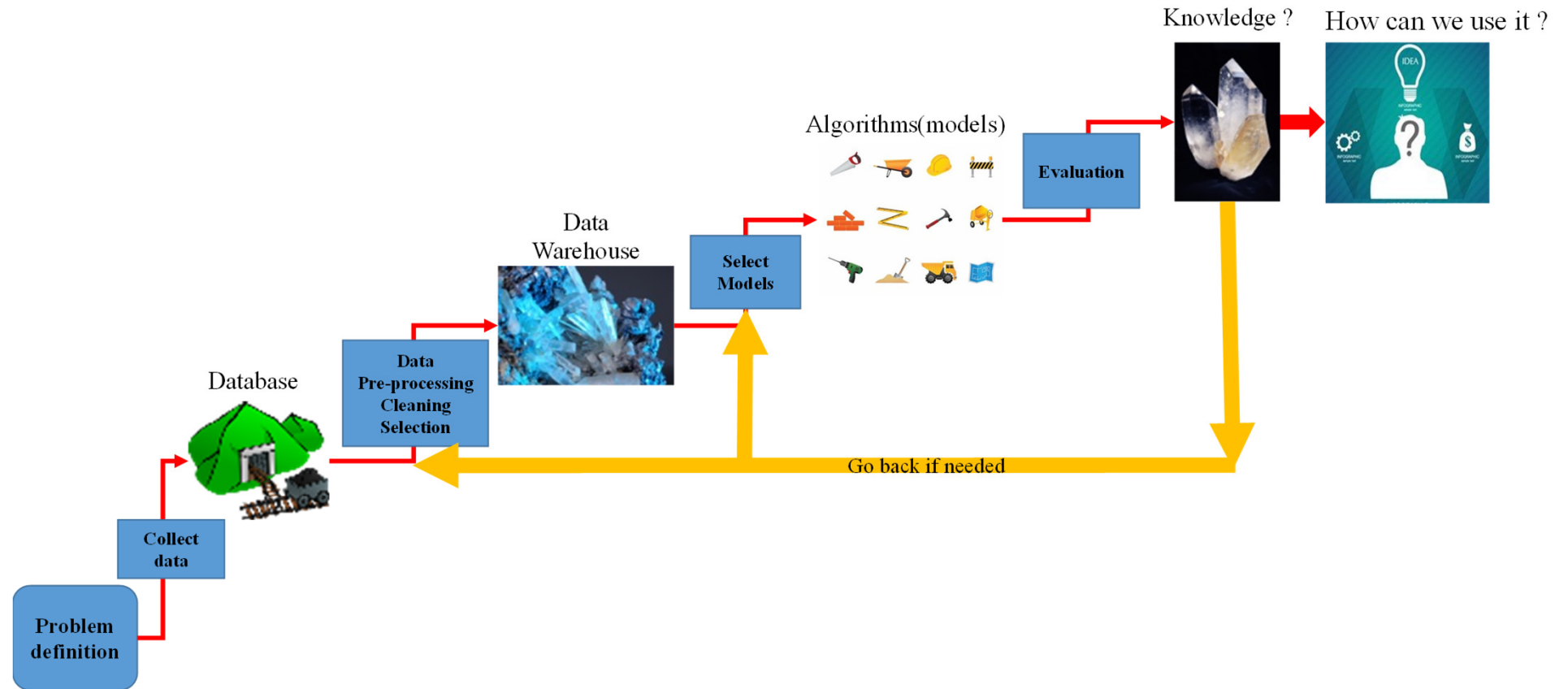
- Data mining is the process of sorting through large data sets to identify patterns, associations, anomalies, and establish relationships to solve problems through data analysis.
- Applications in computer intelligence, computer vision, robotics, recommendation system, cyber-physical interaction, medical, physical, manufacturing.
- Data mining allow users to predict the experiment results by using machine learning tools.



# RELATIONS BETWEEN DATA MINING & MACHINE LEARNING



# DATA MINING: PROCESS OF KNOWLEDGE DISCOVERY



Start!

## Data mining steps

# NATURAL LANGUAGE PROCESSING

My group has nice experience on text mining, nlp, etc. Please refer to my student thesis last year (Fulltext available)

Syu, Ming-Ying, “BERT assisted low-resource machine translation using embedding to embedding transformer and dual objective fitting”

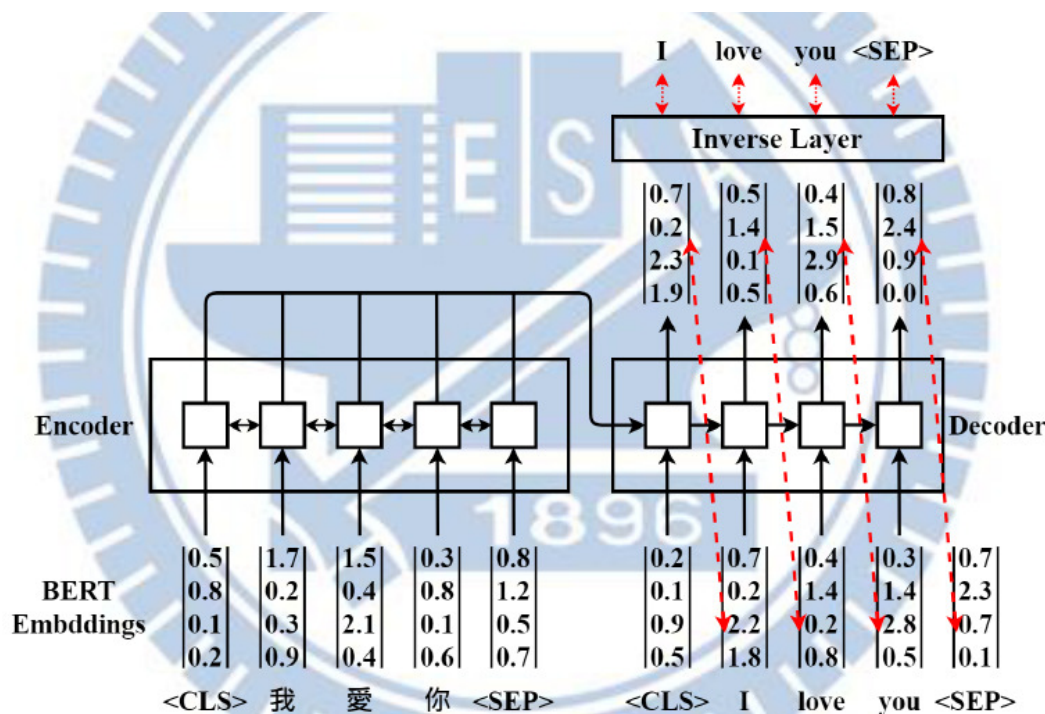
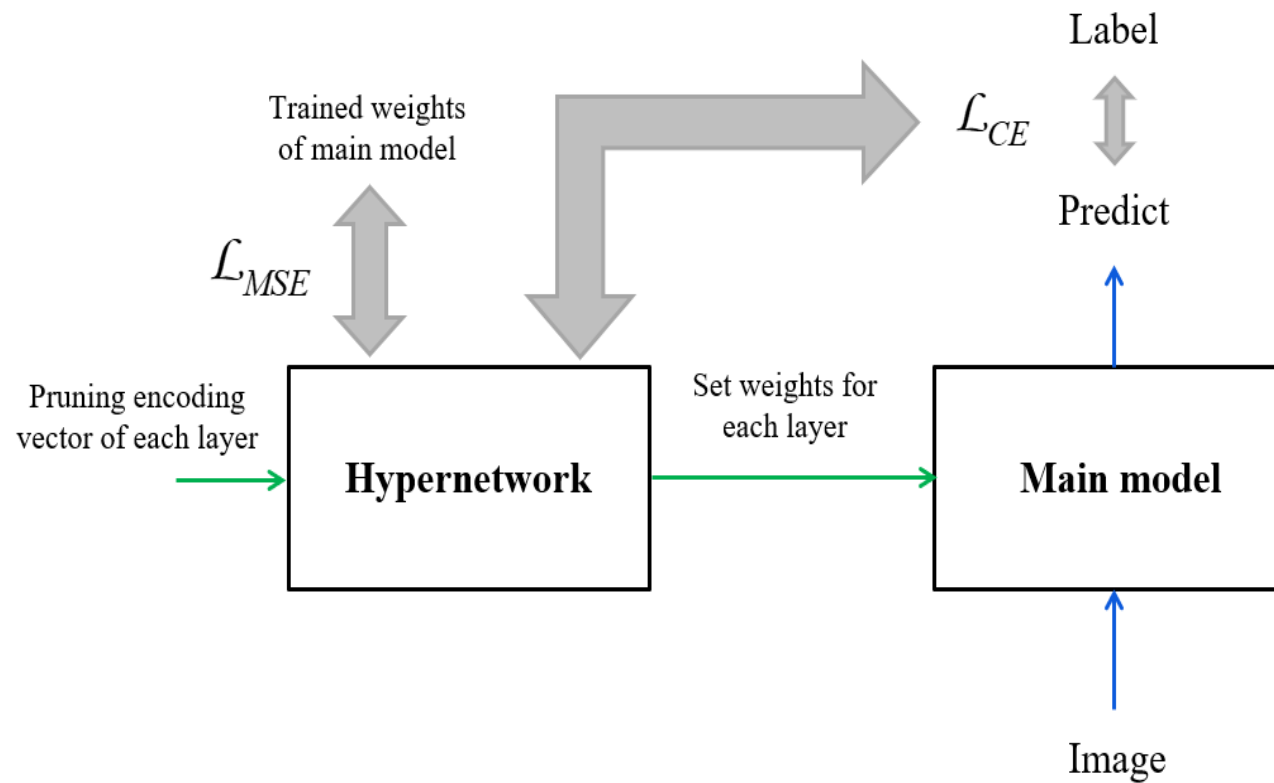


Figure 17 Embedding to Embedding Transformer with Dual Objective Fitting

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# MODEL PRUNING

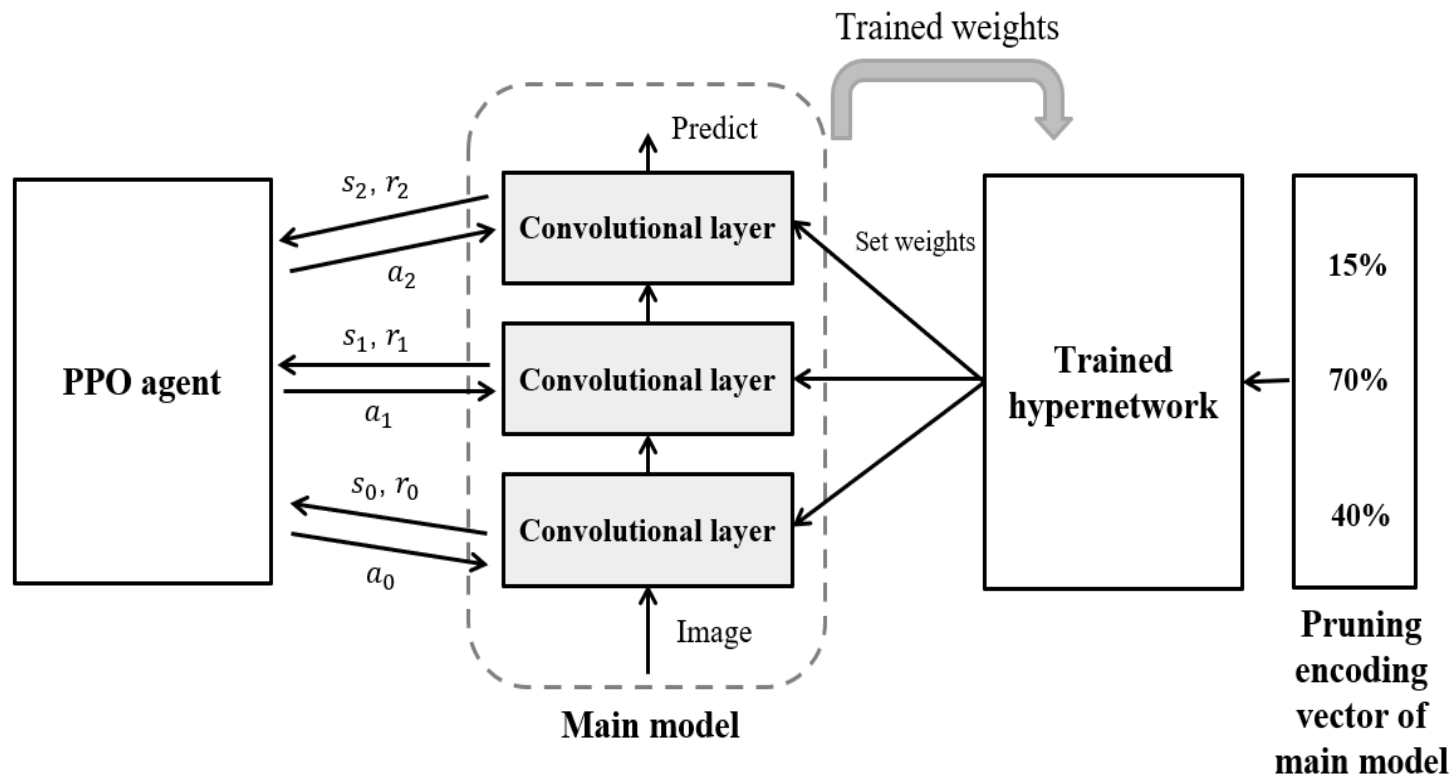
Huang, Tzu-yang, “Automatic Filter Pruning Method via Semi-supervised Multi-task Learning HyperNetwork”, MS Thesis





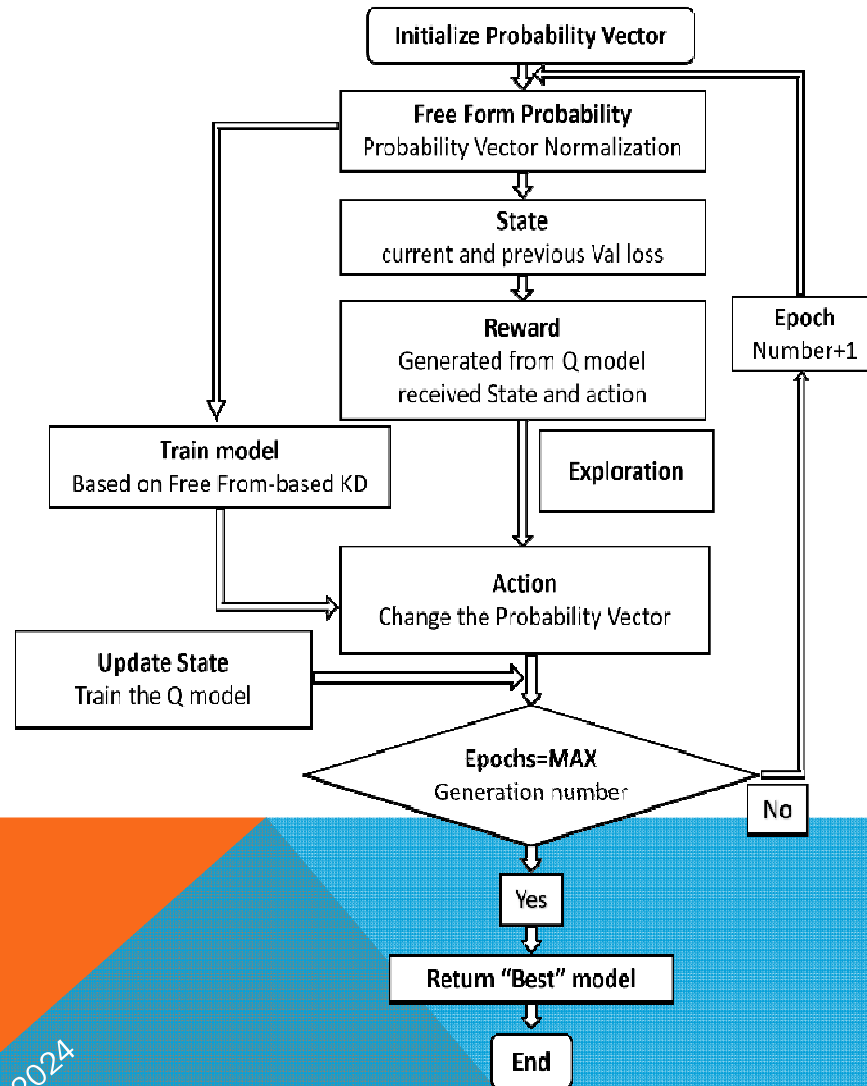
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Huang, Tzu-yang, “Automatic Filter Pruning Method via Semi-supervised Multi-task Learning HyperNetwork”, MS Thesis



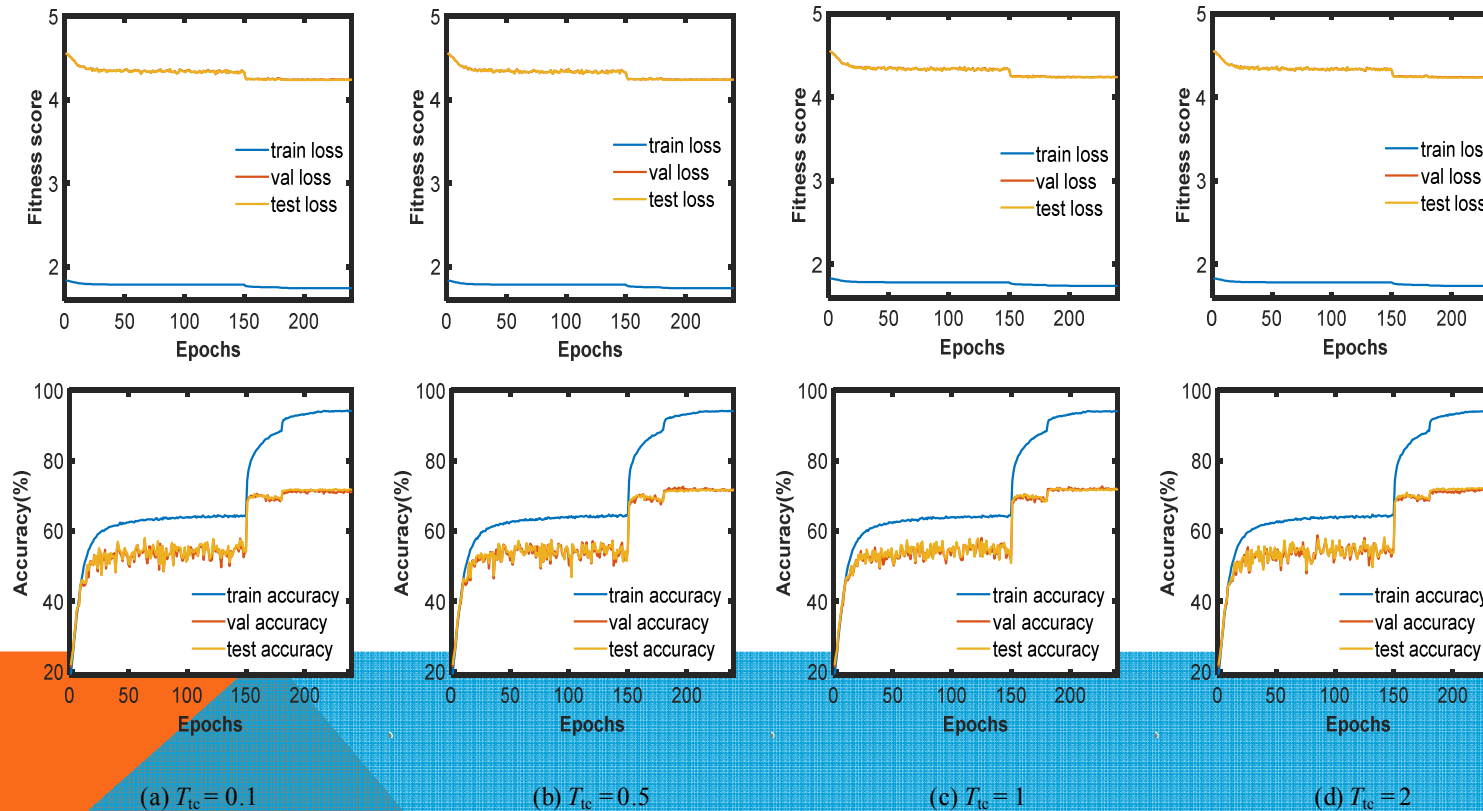
# KNOWLEDGE DISTILLATION

Jiang, Bing-Ru, “ Construction of Compact Device Model and Model Compression Based on Machine Learning ”, MS Thesis



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Thank you,  
and Welcome your visit!

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