Training Log Interpreter

This notebook parses and visualizes training logs from the Int2Int model training. It extracts model parameters, task information, and plots metrics over epochs.

Configuration

Specify the path to your training log file:

Parse Training Log

```
Parsed 102 parameters and 207 epoch logs
```

Report Model Configuration and Training Parameters

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MODEL CONFIGURATION AND TRAINING PARAMETERS
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 - EXPERIMENT INFO
  Experiment Name: mu
  Experiment ID: 1
  Task Type: MU
  Operation: data

 - DATA
  Training Data: /mnt/c/Users/ziwen/clair/mobius_case_study/input/input_dir_interCRT1
00_with_n_natural/mu_interCRT100_with_n_natural.txt.train
  Eval Data: /mnt/c/Users/ziwen/clair/mobius_case_study/input/input_dir_interCRT100_w
ith_n_natural/mu_interCRT100_with_n_natural.txt.test
  Data Types: int[201]:range(-1,2)
  Base: 1000
  Modulus: 67

 - MODEL ARCHITECTURE
  Architecture: encoder_decoder
  Encoder Layers: 4
  Decoder Layers: 4
  Encoder Embedding Dim: 256
  Decoder Embedding Dim: 256
  Encoder Heads: 8
  Decoder Heads: 8
  Dropout: 0
  Attention Dropout: 0

 - TRAINING PARAMETERS
  Optimizer: adam_inverse_sqrt,lr=0.00025
  Batch Size: 96
  Eval Batch Size: 128
  Epoch Size: 50000
  Max Epochs: 201
  Eval Size: 10000
  Gradient Clipping: 5
  Max Length: 512
  Max Output Length: 512

 - OTHER SETTINGS
  FP16: False
  CPU Mode: False
  Multi-GPU: False
  Num Workers: 0

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Convert Metrics to DataFrame

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Total epochs recorded: 207

First few epochs:
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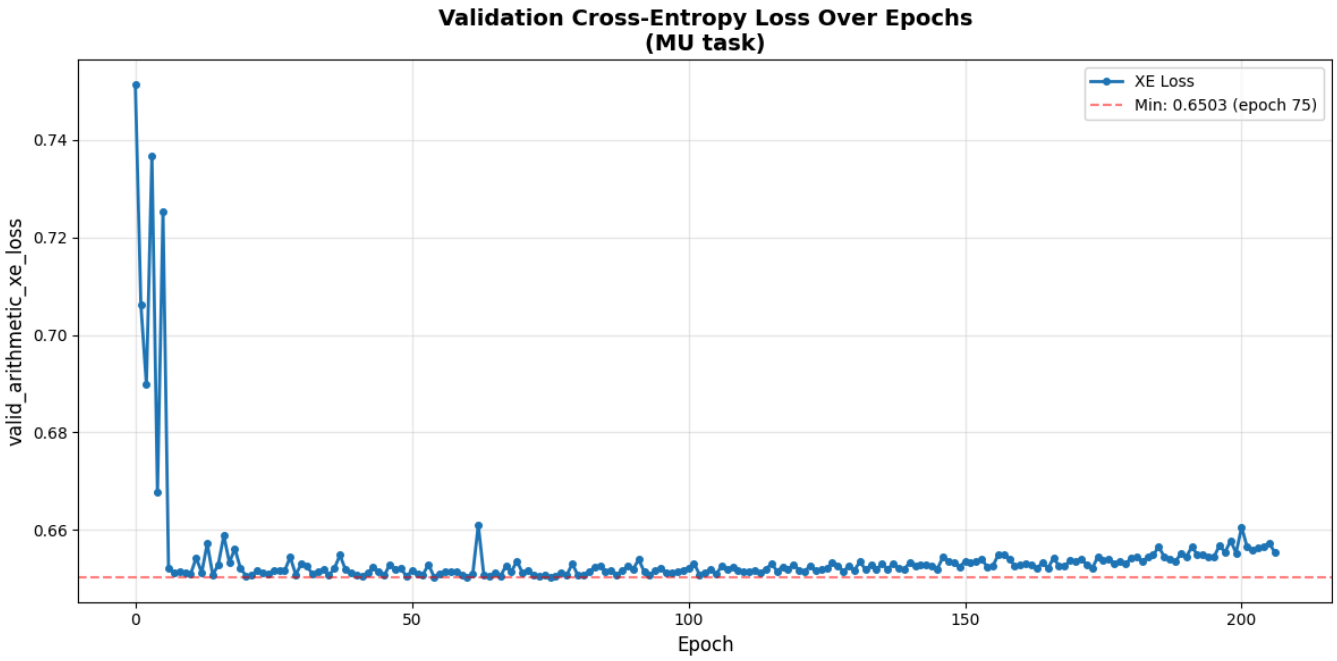
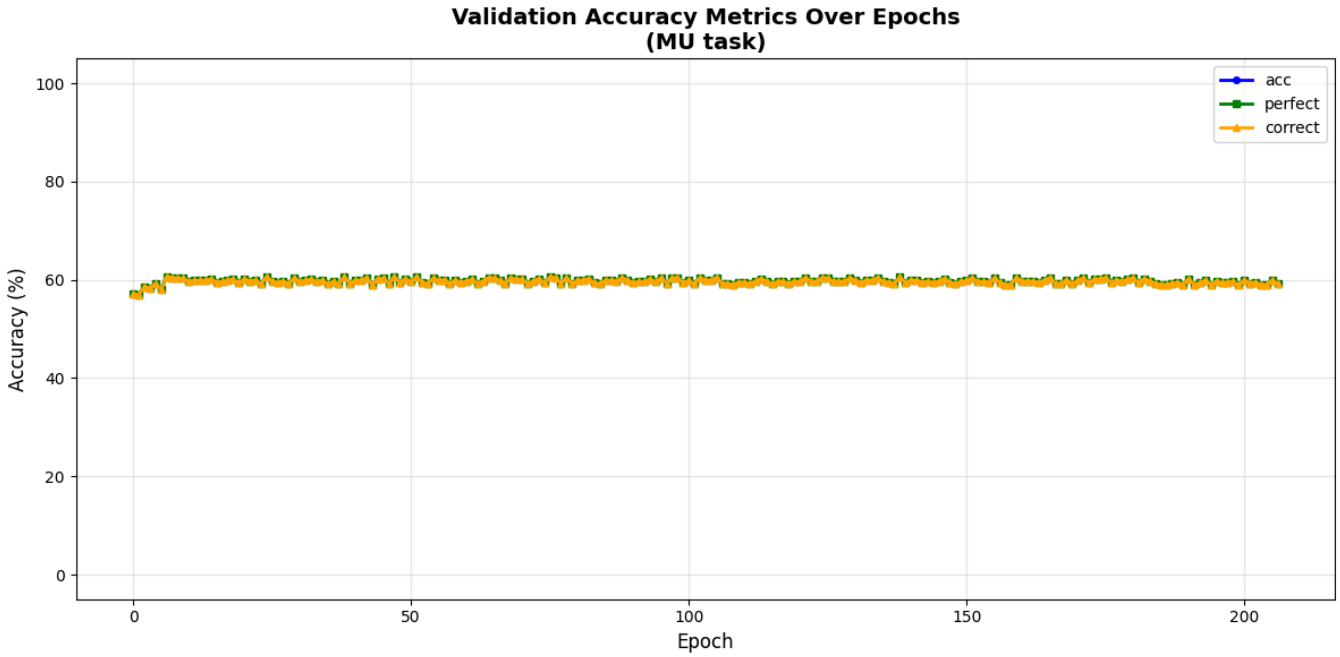
	epoch	valid_arithmetic_xe_loss	valid_arithmetic_acc	valid_arithmetic_perfect	valid_a
0	0	0.751308	57.10	57.10	
1	1	0.706245	56.95	56.95	
2	2	0.689803	58.60	58.60	
3	3	0.736733	58.34	58.34	
4	4	0.667658	59.23	59.23	
5	5	0.725268	57.97	57.97	
6	6	0.652125	60.60	60.60	
7	7	0.651252	60.47	60.47	
8	8	0.651536	60.30	60.30	
9	9	0.651135	60.27	60.27	

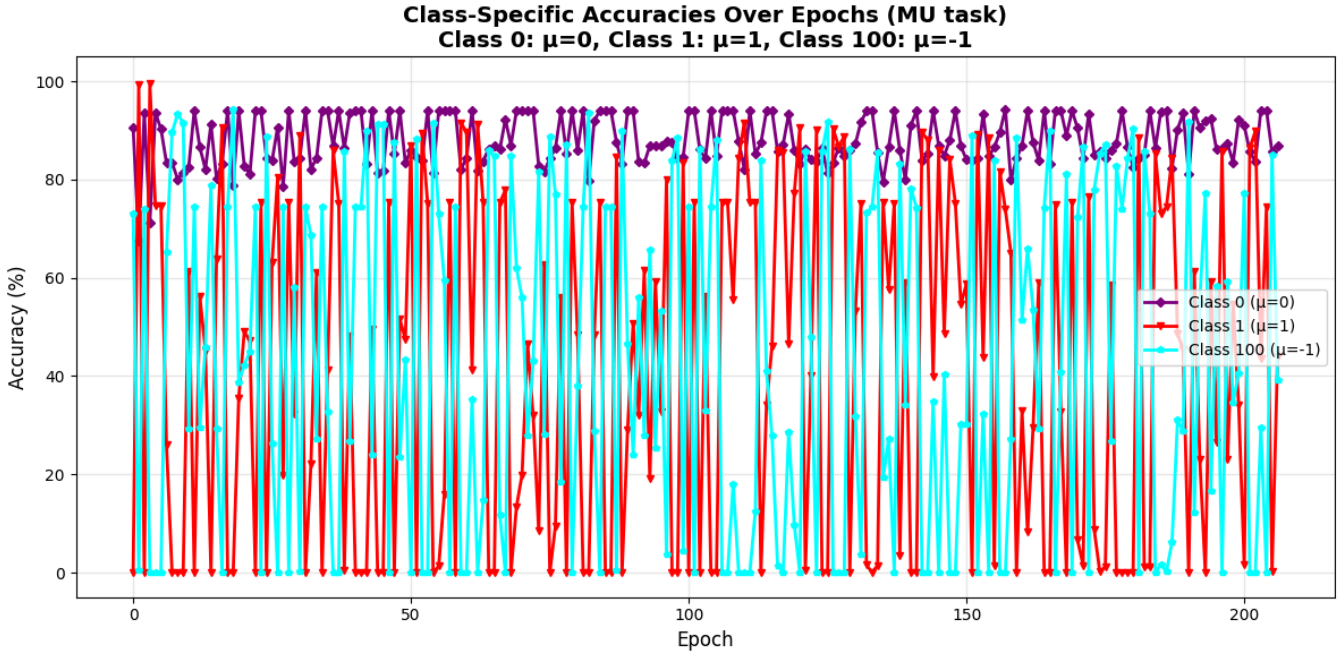
Plot 1: Cross-Entropy Loss



Plot 2: Accuracy Metrics (acc, perfect, correct)



Plot 3: Class-specific Accuracies (acc_0, acc_1, acc_100)



Best Metrics Report

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BEST METRICS ACROSS ALL EPOCHS
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 CROSS-ENTROPY LOSS
  Best Loss: 0.650314
  Achieved at Epoch: 75

 ACCURACY METRICS

  ACC:
    Best: 60.60%
    Achieved at Epoch: 6

  PERFECT:
    Best: 60.60%
    Achieved at Epoch: 6

  CORRECT:
    Best: 60.60%
    Achieved at Epoch: 6

 CLASS-SPECIFIC ACCURACIES

  Class 0 (μ=0):
    Best: 94.33%
    Achieved at Epoch: 157

  Class 1 (μ=1):
    Best: 99.45%
    Achieved at Epoch: 3

  Class 100 (μ=-1):
    Best: 94.36%
    Achieved at Epoch: 18

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 LATEST EPOCH METRICS:
  Epoch: 206.0
  XE Loss: 0.655388
  Accuracy: 59.24%
  Perfect: 59.24%

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```