

## Initial Prompt

<Task Prompt>  
<Data Prompt>  
<Tool Prompt>

## Selected Tools

Fast and Accurate ML in 3  
Lines of Code



Get Started

## User Input Per Iteration

Continue with the fix.



Iterative Code  
Generation & Execution



Semantic Memory

## Coding Prompt

As an AutoML Agent, you will be given a folder containing data and description files. Please generate P

1. Data preprocessing:
  - Remove training data samples without valid labels (unless told not to do so).
  - Remove the unnecessary index column (if applicable)
2. Model training:
  - Use autogluon.multimodal with appropriate parameters for the task
  - If a model is trained, save it in a folder with random timestamp within /media/agent/maab/runs/RUN\_
3. Prediction:
  - Make predictions on the test data
  - Save the predicted results to /media/agent/maab/runs/RUN\_20250227\_235037/outputs/autonagentsonnet
  - ENSURE the output columns match what in the training file, or those in the sample submission file
4. Documentation:
  - Add a brief docstring at the beginning of the script explaining its purpose and usage
  - Also include additional installation steps with comments at the beginning of the script
  - Include comments explaining any complex operations or design decisions
5. Others:
  - To avoid DDP errors, wrap the code in: if \_\_name\_\_ == "\_\_main\_\_":
  - Ensure errors are propagated up and not silently caught - do not use try/except blocks unless you



Episodic Memory



Semantic Memory

Iteration Step T



Coder

Iteration Step T

Iteration Step T+1

## Bash Script

```
#!/bin/bash

# Execute the Python script
CUDA_VISIBLE_DEVICES=0 python3 /xxx/generated_code.py
```

## Python Code

```
"""
AutoGluon Multimodal script for camouflaged object semantic segmentation.
This script trains a model to identify and segment camouflaged objects in
images.
Required packages:
pip install autogluon.multimodal
python3 -m pip install "mcmcvm==2.1.0"
python3 -m pip install "mmdet==3.2.0"
python3 -m pip install "mengine==0.10.6"
"""
import os
import pandas as pd
import cv2
from datetime import datetime
from autogluon.multimodal import MultiModalPredictor
import numpy as np

if __name__ == "__main__":
    # Set single GPU
    os.environ["CUDA_VISIBLE_DEVICES"] = "0"

    # Define paths
```

Other Prompts and I/O



Executor

If Failed

## Log & Errors

```
File "/opt/conda/lib/python3.12/site-packages/autogluon/multimodal/learners/ba
config = get_config()
~~~~~
File "/opt/conda/lib/python3.12/site-packages/autogluon/multimodal/autogluon
config = apply_omegaconf_overrides(config, overrides=overrides, check_key_ex
~~~~~
File "/opt/conda/lib/python3.12/site-packages/autogluon/multimodal/autogluon
raise KeyError(
KeyError: "optimization.batch_size" is not found in the config. You may need to
```

If Success

## Outputs

Output

- predicted\_masks
- saved\_model
- results.csv



Episodic Memory

Iteration Step T+1