Case-Level Decision Making Code Update

Presentation 5

Integrated Code to Skeleton Code

SVC decision function included in skeleton code and integrated to work with code setup (sample outputs below)

```
# === Run Case-Level Model Evaluation ===
evaluate_model_case_level_svc(model, train_meta, test_meta, train_loader, test_loader, 25, tune_svc=False)
```

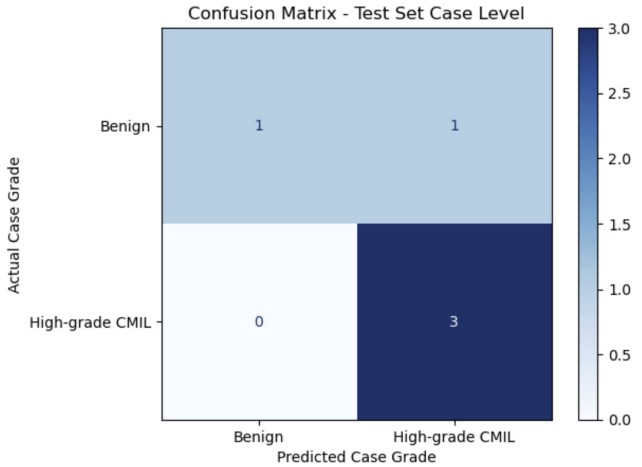
```
=== Train Set Performance ===
Train Accuracy: 1.0
Train Precision 1.0
Train Recall: 1.0
Train F1 Score: 1.0

=== Test Set Performance ===
Test Accuracy: 0.8
Test Precision 0.75
Test Recall: 1.0
Test F1 Score: 0.8571428571428571

Classification Report:
                precision    recall  f1-score   support

        Benign       1.00      0.50      0.67         2
High-grade CMIL       0.75      1.00      0.86         3

      accuracy                           0.80         5
     macro avg       0.88      0.75      0.76         5
  weighted avg       0.85      0.80      0.78         5
```



New Handling of Multi-Stain Code

- Different stains contain different information; therefore if we choose to train on multiple stains, we should use the top-k results of each stain separately
- Updated code automatically handles results based on the stains used

Sample Train Dataframe

	h&e_prob_0	h&e_prob_1	...	melan_prob_0	...	sox10_prob_0	...
Case 1	*Rank_1_h&e*	*Rank_2_h&e*	...	*Rank_1_melan*	...	Rank_1_sox10	...
Case 2	*Rank_1_h&e*	*Rank_2_h&e*	...	*Rank_1_melan*	...	Rank_1_sox10	...
...	...	...	...	...	...	...	...