

**I. What did you do?**

- A) I recreated the train / val / test split without case 91. The updated .npz files can be found in MIL\_trainer\_9Dec\_JointFinal.
- B) I added distribution graphs for the slice-level attention for each stain for each case in the attention analysis code and added analysis on the slides.
- C) I identified which cases have data that is not currently being used because of patch / slice caps, and explored the idea of making additional cases by separating cases into multiple cases by partitioning slices.

**II. How does it help the project?**

- A) was an update / fix from last presentation that is important so that next quarter's model is not negatively impacted by this case. B) was an important follow-up to understand how the slice-level attention is working and if that attention layer is useful. C) was to check the validity of a potential way to get more data and give next quarter direction for next steps.

**III. Issues faced (if any)**

No notable issues were faced.

**IV. Attempts to resolve issues (if any)**

N/A

**V. Issues resolved (if any)**

N/A

**VI. Next steps**

Next steps for the project in WI2026 include what is in part 3 of the presentation:

- Making sub-cases from current data
- Trying patch-by-patch prediction to better understand why model is misclassifying cases, as well as further attention analysis across layers
- Adding regularization for the attention weights
- Tuning hyperparameters in the training configuration

**VII. References**

Krish for ideas for part 3

ChatGPT (code assistance)

**VIII. Links to the presentation & code**

Project 1, Presentation 5 slide link:  Presentation 5 - STAT 390

Project 1, Presentation 5 code link:

[https://github.com/arvindkrishna87/STAT390\\_CMIL\\_Fall2025/tree/main/Code/MIL/MIL\\_trainer\\_9Dec\\_JointFinal](https://github.com/arvindkrishna87/STAT390_CMIL_Fall2025/tree/main/Code/MIL/MIL_trainer_9Dec_JointFinal)