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Presentation 3 - GitHub documentation

I. **What did you do?**

A) I created a personal sbatch file and ran the model training process.
B) I made a copy of Jack's initial training files and updated the attention_analysis.py file (to updated_attention_analysis.py). I called this updated file in main.py and used the checkpoints from Jack's run, run_20251105_110756, to visualize the patches of desired combinations of high grade / benign and high / low attention (collaborated with Luna for this).

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

A) is important for all of us to understand the process of running the model and be able to execute it. B) helped us get an understanding of what patches are (un)important in training for both benign and high grade cases. It also got me more comfortable with the file structure / data loader so that I can continue to do more detailed analysis in the coming weeks.

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

There were collective run issues in working in Quest. There was also definitely a personal learning curve to Quest since I have never used it before, and so it took a while for me to understand the file structure and how to best successfully edit the attention analysis.

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

After the initial Quest running issues were resolved, when editing the attention analysis I used the help of the teammates who were more comfortable with the file structure / Quest, as well as referred to AI tools for coding and conceptual help.

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

With the help of the teaching staff the model is now able to run on Quest. Debugging for the attention analysis was successful.

VI. **Next steps**

Next steps for the project include:
(1) Investigating overfitting and gradient descent improvements
(2) Experimenting with removing the slice-level attention layer, especially for slices split into sub-slices
(3) Scrutinizing transformations and large grey areas seen post-transformation
(4) Using attention score to experiment with training stratification

VII. **References**

ChatGPT (conceptual understanding help, code assistance)
DeepSeek (conceptual understanding help, code generation, debugging, and assistance)

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

Project 1, Presentation 3 slides link: Presentation 3 - STAT 390

Project 1, Presentation 3 code link:
https://github.com/arvindkrishna87/STAT390_CMIL_Fall2025/tree/5135657fd9f6c3eac6a8ad8ada16ae6f9b747228/Code/MIL/MIL_trainer_05Nov_Paisley