Summary of TensorBoard Screenshots

This folder includes several screenshots captured from TensorBoard to demonstrate model monitoring and evaluation throughout the training process. Each file is clearly named for easy identification:

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1. Loss Curves

- **`loss_plot_train_val_apr15.png`**
  Displays training and validation loss over 1000 steps. The curves show steady convergence, with validation loss closely following training loss. This demonstrates that the model generalizes well and is not severely overfitting.

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2. Input Images

- **`input_images_training_step_999.png`**
    - MRI slices from the training set.
- **`input_images_validation_step_1000.png`**
    - MRI slices from the validation set.
      These images confirm that the data loading and preprocessing pipelines worked correctly and that inputs are properly normalized and structured.

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3. Ground Truth Masks

- **`ground_truth_mask_training_step_999.png`**
- **`ground_truth_mask_validation_step_1000.png`**
  Show true segmentation labels used as targets during training. These masks help validate the spatial alignment between the input and expected output.

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4. Predicted Masks

- **`prediction_mask_training_step_999.png`**

- **`prediction_mask_validation_step_1000.png`**
  These are the predicted segmentation masks generated by the model. Strong visual alignment between prediction and ground truth demonstrates accurate learning.

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5. Probability Maps

- **`probability_map_training_step_999.png`**

- **`probability_map_validation_step_1000.png`**
  Probability overlays visualized in TensorBoard. Red regions indicate ground truth, green indicates predictions. Yellow/white regions reflect overlap — high overlap means high confidence and good performance.

These screenshots provide visual proof that the training process was monitored effectively and that the model is learning to produce clinically relevant segmentations. They are aligned with the Udacity requirement to show scalar and image data being logged and interpreted using TensorBoard.