|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Settings** | **LearningRate Multiplier 1** | **Epochs 1** | **BatchSize 1** | **LearningRate Multiplier 2** | **Epochs 2** | **BatchSize 2** |
| Gemini 1.5 Flash 001 | Setting 4 | 0.5 | 1 | 8 | 2 | 1 | 4 |

**Before Fine Tuning**

Overall Accuracy: 35.00%

Correct Cases: 7/20

**Setting1**

Overall Accuracy: 20.00%

Correct Cases: 4/20

**Loss Curve:**

* Loss decreases quickly during the initial phase (0–0.2 epoch) but stabilizes early with minimal fluctuations.
* Final loss converges around **50**, indicating stable but insufficient optimization.

**Analysis:**

* The learning rate is too small, resulting in slow optimization. While the curve is stable, the model fails to effectively learn features from the dataset.
* This under-optimization reflects in the poor accuracy (20%).

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**Setting2**

Overall Accuracy: 35.00%

Correct Cases: 7/20

**Loss Curve:**

* Loss drops rapidly in the early phase (0–0.2 epoch), but significant fluctuations occur later, with peaks reaching nearly 550.
* Final loss converges at a value similar to Setting 1, but with much higher volatility during training.

**Analysis:**

* The learning rate of 0.002 is too high, leading to instability in the optimization process. The large parameter updates cause fluctuations and hinder effective convergence.
* This instability results in no improvement in accuracy (35%), as the model likely overfits or struggles to generalize.

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Overall Result

图形用户界面, 应用程序, 表格

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