

General model comparison

| | | compiles | indentation | no deprecations | functionality | score |
|--------------|-----------|----------|-------------|-----------------|---------------|-------|
| qwen0.5b | base | 39 | 39 | 20 | 9 | 125 |
| | finetuned | 50 | 5 | 31 | 21 | 149 |
| tinylama1.1b | base | 49 | 46 | 22 | 8 | 141 |
| | finetuned | 50 | 50 | 42 | 32 | 238 |
| qwen1.8b | base | 48 | 22 | 21 | 6 | 109 |
| | finetuned | 50 | 50 | 32 | 10 | 162 |
| phi2 | base | 46 | 46 | 34 | 23 | 195 |
| | finetuned | 49 | 46 | 36 | 31 | 224 |
| gemma2b | base | 50 | 49 | 39 | 24 | 210 |
| | finetuned | 50 | 50 | 43 | 38 | 257 |

Hyperparameters tinylama1.1b

| | | compiles | indentation | no deprecations | functionality | score |
|-----------------|----------|----------|-------------|-----------------|---------------|-------|
| training_epochs | 1 | 50 | 50 | 31 | 23 | 200 |
| | 5 | 50 | 50 | 42 | 32 | 238 |
| | 10 | 50 | 50 | 41 | 10 | 171 |
| learning_rate | 1.00E-05 | 50 | 50 | 33 | 15 | 178 |
| | 5.00E-05 | 50 | 50 | 42 | 32 | 238 |
| | 1.00E-04 | 48 | 47 | 41 | 30 | 226 |

Quantization Loss (after gguf conversion and q4_km quantization)

| | | compiles | indentation | no deprecations | functionality | score |
|--------------|-----------|----------|-------------|-----------------|---------------|-------|
| gemma2b | finetuned | 50 | 50 | 43 | 38 | 257 |
| | quantized | 44 | 44 | 37 | 34 | 227 |
| tinylama1.1b | finetuned | 50 | 50 | 42 | 32 | 238 |
| | quantized | 50 | 50 | 34 | 22 | 200 |

RAG-Improvement

| | | compiles | indentation | no deprecations | functionality | score |
|--------------|----------|----------|-------------|-----------------|---------------|-------|
| gemma2b | no RAG | 44 | 44 | 37 | 34 | 227 |
| | with RAG | 50 | 50 | 45 | 40 | 265 |
| tinylama1.1b | no RAG | 50 | 50 | 34 | 22 | 200 |
| | with RAG | 50 | 50 | 38 | 30 | 228 |