

■ Final Report: LLM Fine-Tuning with QLoRA

Problem Statement:

Fine-tuning a Large Language Model (LLM) using QLoRA on the Banking77 dataset. The goal is to improve intent classification performance with parameter-efficient fine-tuning.

Dataset:

Dataset: Banking77 (77 intents, customer queries). Task: Intent classification.

Baseline Results:

Metric	Baseline
Accuracy	0.0080
F1 Score	0.0021

Fine-tuned Results:

Metric	Fine-tuned (QLoRA)
Accuracy	0.0990
F1 Score	0.0905
Precision	0.0962
Recall	0.0990
Eval Loss	800.1975

Improvements:

- Accuracy improved by +1137.50% - F1 Score improved by +4146.02%