Part 1/3:

Data Representation and ML Hardware Fundamentals

1. Lecture Introduction - ML Workflow and Computer Architecture
2. Bits and Bytes - Understanding ML Data Types
3. Number Representation Methods - Fixed Point vs. Floating Point
4. Quantization Principles and Memory Efficiency
5. CPU vs. GPU - Architectural Comparison
6. GPU Cores and CUDA - Understanding Parallel Processing
7. FLOPS and ML Model Performance Metrics
8. Tensor Operations and Hardware Optimization