Spacture Task

muhammed sezer

February 2024

Comparing YOLOv8 models in PyTorch (`.pt`) and ONNX format on CPU

1. **Performance and Inference Time**:

   - **PyTorch (.pt)**: PyTorch models are highly optimized for GPU environments, So on CPU, performance of Onnx file was better.
   - **ONNX**: ONNX models can be run with the ONNX Runtime, which is optimized for both CPU and GPU environments. ONNX Runtime is designed to optimize prediction latency and throughput. When comparing to PyTorch on a CPU, ONNX model offer faster inference times due to better optimization for CPU architectures.

2. **Memory Usage**:

   - **PyTorch (.pt)**: PyTorch's dynamic computation graph lead to varying memory usage during inference.
   - **ONNX**: ONNX models tend to have more predictable and lower memory usage on CPU.

3. **Accuracy and Model Fidelity**:

   - **PyTorch (.pt)**: Running a model natively in its original framework ensures that there are no changes in the model's behavior or accuracy due to conversion processes.
   - **ONNX**: The conversion process from PyTorch to ONNX can sometimes lead to slight discrepancies. However I have never faced with such situation.
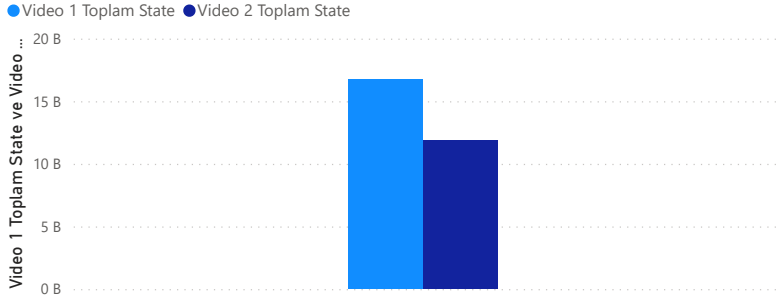
Şerit ölçütüne göre Video 1 ve Video 2
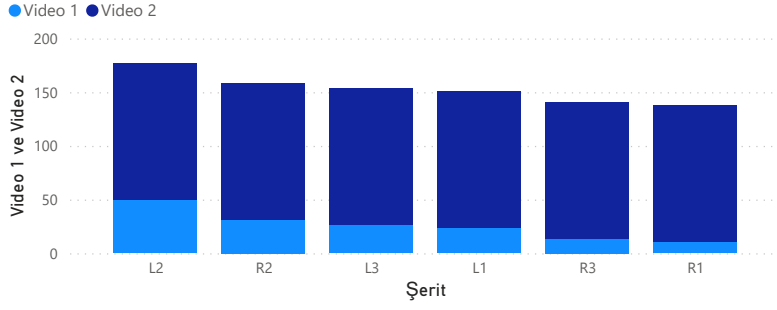
● Video 1 ● Video 2

state ölçütüne göre Video 1 araç durumları
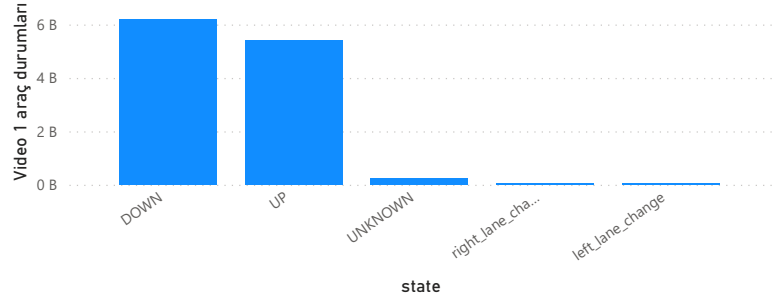
Video 1 Toplam State ve Video 2 Toplam State

● Video 1 Toplam State ● Video 2 Toplam State

state ölçütüne göre Video 2 Araç Durumları