

## Serialized Test Coverage Report

This is an automatically generated file. Please see `caffe2/python/serialized_test/README.md` for details. In the case of merge conflicts, please rebase and regenerate. `##`

Summary Serialized tests have covered 220/852 (25.8%) operators

### Not covered operators

There are 632 not covered operators

- APMeter
- ATen
- Abs
- AbsGradient
- Accumulate
- AccumulateHistogram
- Accuracy
- Adam
- Add
- AddFakeFp16
- AddGradient
- Alias
- AliasWithName
- Allgather
- Allreduce
- And
- Append
- Assert
- AtomicAppend
- AtomicFetchAdd
- AtomicFetchAdd64
- AtomicIter
- AveragePool
- AveragePool1D
- AveragePool1DGradient
- AveragePool2D
- AveragePool2DGradient
- AveragePool3D
- AveragePool3DGradient
- AveragePoolGradient
- AveragePut
- BRGNCHWCToPackedInt8BGRAStylizerDeprocess
- Barrier
- BatchMatMulFP16Acc16Fake
- BatchMatMulFP16Acc32Fake
- BatchMatMulFP16Fake

- BatchPermutation
- BatchPermutationGradient
- BatchToSpace
- BisectPercentile
- BitwiseAnd
- BitwiseOr
- BitwiseXor
- BooleanMaskGradient
- BooleanMaskLengths
- Broadcast
- Bucketize
- ByteWeightDequant
- Cast
- Cbrt
- CbrtGradient
- CheckAtomicBool
- CheckCounterDone
- CheckDatasetConsistency
- Checkpoint
- CloneCommonWorld
- CloseBlobsQueue
- CloseRebatchingQueue
- Col2Im
- CollectRpnProposals
- CollectTensor
- ComputeOffset
- ConcatBatchMatMulBatchGatherOp
- ConcatTensorVector
- ConditionalSetAtomicBool
- Conv1D
- Conv1DGradient
- Conv2D
- Conv2DGradient
- Conv3D
- Conv3DGradient
- ConvRelu
- ConvTranspose
- ConvTransposeGradient
- Copy
- CopyCPUToGPU
- CopyFromCPUInput
- CopyGPUToCPU
- CopyOnDeviceLike
- CopyRowsToTensor
- CopyRowsToTensorGradient
- Cos

- CosGradient
- CosineSimilarity
- CosineSimilarityGradient
- CountDown
- CountUp
- Crash
- CreateAtomicBool
- CreateBlobsQueue
- CreateBlobsQueueDB
- CreateCommonWorld
- CreateCounter
- CreateDB
- CreateMap
- CreateMutex
- CreateRebatchingQueue
- CreateScope
- CreateTensorVector
- CreateTextFileReader
- CreateTreeCursor
- CrossEntropy
- CrossEntropyGradient
- Cube
- CubeGradient
- DBExists
- DataCouple
- DeformConv
- DeformConvGradient
- DenseVectorToIdList
- DepthConcat
- DepthSplit
- DequeueBlobs
- DequeueRebatchingQueue
- DestroyCommonWorld
- DistributeFpnProposals
- Div
- DivFakeFp16
- DivGradient
- Do
- DotProductWithPadding
- DotProductWithPaddingGradient
- EQ
- EnforceFinite
- EnqueueBlobs
- EnqueueRebatchingQueue
- EnsureCPUOutput
- EnsureClipped

- EnsureDense
- Equalizer
- Exp
- ExpandDims
- FCFp16X
- FCGradient\_Decomp
- FCGradient\_Prune
- FCTransposed
- FCTransposedGradient
- FC\_Decomp
- FC\_Prune
- FC\_Sparse
- FP16MomentumSGDUpdate
- FP32MomentumSGDUpdate
- FP32ToFP16Fake
- FP32ToFP16FakeNoSubnormal
- Fail
- FbFCPacked
- FbGemmPack
- FbGemmPackTranspose
- FeedBlob
- FilterExampleIds
- FilterSparseLabels
- Flatten
- FlattenToVec
- Float16ConstantFill
- Float16UniformFill
- FloatToFused2BitFakeRowwiseQuantized
- FloatToFused2BitRowwiseQuantized
- FloatToFused4BitFakeRowwiseQuantized
- FloatToFused4BitRowwiseQuantized
- FloatToFused8BitRowwiseQuantized
- FloatToFused8BitRowwiseQuantizedHalfScaleBias
- FloatToFusedRandRowwiseQuantized
- FloatToHalf
- FloatToRowwiseQuantized8Bits
- Fp16FC
- Fp16FCAcc16
- Fp16FCAcc16NNPI
- Fp16FCAcc32
- Fp16FCAcc32NNPI
- Free
- Ftrl
- FunHash
- FunHashGradient
- Fused2BitRowwiseQuantizedToFloat

- Fused2BitRowwiseQuantizedToHalf
- Fused4BitRowwiseQuantizedToFloat
- Fused4BitRowwiseQuantizedToHalf
- Fused8BitRowwiseQuantizedHalfScaleBiasToFloat
- Fused8BitRowwiseQuantizedHalfScaleBiasToHalfFloat
- Fused8BitRowwiseQuantizedToFloat
- Fused8BitRowwiseQuantizedToHalfFloat
- FusedRandRowwiseQuantizedToFloat
- GE
- GFtrl
- GT
- GatherByKey
- GatherFused8BitRowwise
- GaussianFill
- Gelu
- GeluGradient
- GenerateProposals
- GenerateProposalsCPP
- GetAllBlobNames
- GetCursorOffset
- GetGPUMemoryUsage
- GivenTensorBoolFill
- GivenTensorByteStringToUInt8Fill
- GivenTensorDoubleFill
- GivenTensorFill
- GivenTensorInt16Fill
- GivenTensorInt64Fill
- GivenTensorIntFill
- GivenTensorStringFill
- HSoftmax
- HSoftmaxGradient
- HSoftmaxSearch
- HalfFloatToFused8BitRowwiseQuantized
- HalfFloatToFused8BitRowwiseQuantizedHalfScaleBias
- HalfToFloat
- HalfToFused2BitFakeRowwiseQuantized
- HalfToFused2BitRowwiseQuantized
- HalfToFused4BitFakeRowwiseQuantized
- HalfToFused4BitRowwiseQuantized
- HardSigmoid
- HardSigmoidGradient
- HasElements
- HasScope
- HeatmapMaxKeypoint
- Histogram
- HuffmanTreeHierarchy

- If
- Im2Col
- ImageInput
- IncrementPut
- IndexFreeze
- IndexGet
- IndexLoad
- IndexSize
- IndexStore
- InferenceLSTM
- Int8Add
- Int8AddRelu
- Int8AveragePool
- Int8AveragePoolRelu
- Int8ChannelShuffle
- Int8Concat
- Int8Conv
- Int8ConvRelu
- Int8ConvTranspose
- Int8Dequantize
- Int8DequantizeNNPI
- Int8FC
- Int8FCFakeAcc32NNPI
- Int8Flatten
- Int8GivenIntTensorFill
- Int8GivenTensorFill
- Int8LeakyRelu
- Int8MaxPool
- Int8MaxPoolRelu
- Int8Quantize
- Int8QuantizeNNPI
- Int8Relu
- Int8Reshape
- Int8ResizeNearest
- Int8RoIAlign
- Int8Sigmoid
- Int8Slice
- Int8Softmax
- Int8Sum
- Int8SumRelu
- Int8Transpose
- IntIndexCreate
- IsEmpty
- IsNaN
- Iter
- KeySplit

- KeyValueToMap
- L1Distance
- L1DistanceGradient
- LC1D
- LC1DGradient
- LC2D
- LC2DGradient
- LC3D
- LC3DGradient
- LE
- LRN
- LRNGradient
- LSTMUnit
- LSTMUnitGradient
- LT
- LabelCrossEntropy
- LabelCrossEntropyGradient
- LambdaRankNdcg
- LambdaRankNdcgGradient
- Lars
- LastNWindowCollector
- LayerNorm
- LayerNormFakeFP16
- LengthsIndicesInGradientMeanGradient
- LengthsIndicesInGradientSumGradient
- LengthsMax
- LengthsMaxWithMainInputAndForwardOutputGradient
- LengthsMean
- LengthsMeanGradient
- LengthsPartition
- LengthsSumGradient
- LengthsToSegmentIds
- LengthsToShape
- LengthsToWeights
- LengthsWeightedSum
- LengthsWeightedSumGradient
- LengthsWeightedSumWithMainInputGradient
- Load
- LogFatal
- Logit
- LogitGradient
- LongIndexCreate
- LpNorm
- LpNormGradient
- LpPool
- LpPoolGradient

- MSRAFill
- MakeTwoClass
- MakeTwoClassGradient
- MapToKeyValue
- MaxPool
- MaxPool1D
- MaxPool1DGradient
- MaxPool2D
- MaxPool2DGradient
- MaxPool3D
- MaxPool3DGradient
- MaxPoolGradient
- MaxPoolWithIndex
- MaxPoolWithIndexGradient
- MergeDim
- MergeExampleIds
- MergeMultiListFeatureTensors
- MergeMultiListFeatureTensorsGradient
- MergeMultiMapFeatureTensors
- MergeMultiMapFeatureTensorsGradient
- MergeMultiScalarFeatureTensors
- MergeMultiScalarFeatureTensorsGradient
- MergeSingleListFeatureTensors
- MergeSingleListFeatureTensorsGradient
- MergeSingleMapFeatureTensors
- MergeSingleMapFeatureTensorsGradient
- MergeSingleScalarFeatureTensors
- MergeSingleScalarFeatureTensorsGradient
- Mod
- MomentumSGDUpdate
- MulFakeFp16
- MulGradient
- MultiClassAccuracy
- NCHW2NHWC
- NE
- NGramFromCategorical
- NHWC2NCHW
- Normalize
- NormalizeGradient
- NormalizeL1
- NormalizePlanarYUV
- Not
- Onnxifi
- Or
- PRelu
- PReluGradient



- PackRecords
- PackedInt8BGRANHWCToNCHWCStylizerPreprocess
- PadEmptySamples
- Partition
- Percentile
- Perplexity
- PrependDim
- Print
- Python
- PythonDLPack
- PythonDLPackGradient
- PythonGradient
- QuantDecode
- QuantDecodeGradient
- QuantDecompZstd
- Quantile
- RMACRegions
- Range
- RangeFill
- ReadNextBatch
- ReadRandomBatch
- ReceiveTensor
- Reciprocal
- ReciprocalGradient
- RecurrentNetworkBlobFetcher
- Reduce
- ReduceBackSum
- ReduceBackSumGradient
- ReduceFrontWeightedSum
- ReduceFrontWeightedSumGradient
- ReduceL1
- ReduceL1Gradient
- ReduceScatter
- ReduceSum
- ReduceSumGradient
- ReduceTailSum
- ReluFakeFp16
- RemovePadding
- ReplaceNaN
- ReservoirSampling
- ResetCounter
- ResetCursor
- Reshape
- ResizeLike
- ResizeNearest
- ResizeNearest3D

- ResizeNearest3DGradient
- ResizeNearestGradient
- RetrieveCount
- RmsProp
- RoIAlign
- RoIAlignGradient
- RoIAlignRotated
- RoIAlignRotatedGradient
- RoIPool
- RoIPoolGradient
- RowMul
- RowWiseCounter
- RowWiseSparseAdagradFusedWithSparseLengthsSumGradient
- RowWiseSparseAdagradFusedWithSparseLengthsWeightedSumGradient
- RowWiseSparseAdagradFusedWithSparseLengthsWeightedSumGradientApprox
- RowWiseSparseAdam
- Rowwise8BitQuantizedToFloat
- Rsqrt
- RsqrtGradient
- SafeDequeueBlobs
- SafeEnqueueBlobs
- Save
- Scale
- ScaleBlobs
- Scatter
- ScriptModule
- ScriptModuleLoad
- SegmentIdsToLengths
- SegmentIdsToRanges
- SendTensor
- Shape
- Sigmoid
- SigmoidCrossEntropyWithLogits
- SigmoidCrossEntropyWithLogitsGradient
- SigmoidFakeFp16
- SigmoidFakeFp16NNPI
- SigmoidGradient
- Sin
- SinGradient
- Snapshot
- Softplus
- SoftplusGradient
- Softsign
- SoftsignGradient
- SortAndShuffle
- SortedSegmentMean

- SortedSegmentMeanGradient
- SortedSegmentRangeLogMeanExp
- SortedSegmentRangeLogMeanExpGradient
- SortedSegmentRangeLogSumExp
- SortedSegmentRangeLogSumExpGradient
- SortedSegmentRangeMax
- SortedSegmentRangeMaxGradient
- SortedSegmentRangeMean
- SortedSegmentRangeMeanGradient
- SortedSegmentRangeSum
- SortedSegmentRangeSumGradient
- SortedSegmentSum
- SortedSegmentSumGradient
- SortedSegmentWeightedSum
- SortedSegmentWeightedSumGradient
- SpaceToBatch
- SparseAdagradFusedWithSparseLengthsSumGradient
- SparseAdagradFusedWithSparseLengthsWeightedSumGradient
- SparseAdagradFusedWithSparseLengthsWeightedSumGradientApprox
- SparseAdam
- SparseDropoutWithReplacement
- SparseFtrl
- SparseFunHash
- SparseFunHashGradient
- SparseLabelSplit
- SparseLabelSplitGradient
- SparseLabelToBool
- SparseLabelToDense
- SparseLengthsIndicesInGradientMeanGradient
- SparseLengthsIndicesInGradientSumGradient
- SparseLengthsIndicesInGradientWeightedSumGradient
- SparseLengthsIndicesInGradientWeightedSumWithMainInputGradient
- SparseLengthsMean
- SparseLengthsMean2BitRowwiseSparse
- SparseLengthsMean4BitRowwiseSparse
- SparseLengthsMean8BitRowwiseSparse
- SparseLengthsMean8BitsRowwise
- SparseLengthsMeanFakeFP16
- SparseLengthsMeanFakeFP16AccFP16
- SparseLengthsMeanFakeFP16EmbeddingOnly
- SparseLengthsMeanFused2BitRowwise
- SparseLengthsMeanFused4BitRowwise
- SparseLengthsMeanFused8BitRowwise
- SparseLengthsMeanFused8BitRowwiseFakeFP16
- SparseLengthsMeanFused8BitRowwiseFakeFP16AccFP16
- SparseLengthsMeanGradient

- SparseLengthsPositionalWeightedSum
- SparseLengthsSum
- SparseLengthsSum2BitRowwiseSparse
- SparseLengthsSum4BitRowwiseSparse
- SparseLengthsSum8BitRowwiseSparse
- SparseLengthsSum8BitsRowwise
- SparseLengthsSumFakeFP16
- SparseLengthsSumFakeFP16AccFP16
- SparseLengthsSumFakeFP16EmbeddingOnly
- SparseLengthsSumFused2BitRowwise
- SparseLengthsSumFused4BitRowwise
- SparseLengthsSumFused4BitRowwiseFakeFP16EmbeddingOnly
- SparseLengthsSumFused4BitRowwiseFakeFP16NNPI
- SparseLengthsSumFused8BitRowwise
- SparseLengthsSumFused8BitRowwiseFakeFP16
- SparseLengthsSumFused8BitRowwiseFakeFP16AccFP16
- SparseLengthsSumFused8BitRowwiseFakeFP16AccInvScaleFP16
- SparseLengthsSumFused8BitRowwiseFakeFP16EmbeddingOnly
- SparseLengthsSumFused8BitRowwiseFakeFP16NNPI
- SparseLengthsSumFused8BitRowwiseFakeFP32NNPI
- SparseLengthsSumGradient
- SparseLengthsSumSparseLookup
- SparseLengthsWeightedMean8BitsRowwise
- SparseLengthsWeightedSum
- SparseLengthsWeightedSum2BitRowwiseSparse
- SparseLengthsWeightedSum4BitRowwiseSparse
- SparseLengthsWeightedSum8BitRowwiseSparse
- SparseLengthsWeightedSum8BitsRowwise
- SparseLengthsWeightedSumFakeFP16
- SparseLengthsWeightedSumFakeFP16AccFP16
- SparseLengthsWeightedSumFakeFP16EmbeddingOnly
- SparseLengthsWeightedSumFused2BitRowwise
- SparseLengthsWeightedSumFused4BitRowwise
- SparseLengthsWeightedSumFused4BitRowwiseFakeFP16EmbeddingOnly
- SparseLengthsWeightedSumFused4BitRowwiseFakeFP16NNPI
- SparseLengthsWeightedSumFused8BitRowwise
- SparseLengthsWeightedSumFused8BitRowwiseFakeFP16
- SparseLengthsWeightedSumFused8BitRowwiseFakeFP16AccFP16
- SparseLengthsWeightedSumFused8BitRowwiseFakeFP16AccInvScaleFP16
- SparseLengthsWeightedSumFused8BitRowwiseFakeFP16EmbeddingOnly
- SparseLengthsWeightedSumFused8BitRowwiseFakeFP16NNPI
- SparseLengthsWeightedSumFused8BitRowwiseFakeFP32NNPI
- SparseLengthsWeightedSumGradient
- SparseLengthsWeightedSumWithMainInputGradient
- SparseLpRegularizer
- SparseMatrixReshape

- SparseNormalize
- SparseSortedSegmentMean
- SparseSortedSegmentMeanGradient
- SparseSortedSegmentSum
- SparseSortedSegmentSumGradient
- SparseSortedSegmentWeightedSum
- SparseSortedSegmentWeightedSumGradient
- SparseStorm
- SparseToDense
- SparseToDenseMask
- SparseToDenseMaskGradient
- SparseUnsortedSegmentMean
- SparseUnsortedSegmentMeanGradient
- SparseUnsortedSegmentSum
- SparseUnsortedSegmentSumGradient
- SparseUnsortedSegmentWeightedSum
- SparseUnsortedSegmentWeightedSumGradient
- SpatialBNFakeFp16NNPI
- SpatialBNFakeLoweredFp16NNPI
- SpatialBNRelu
- Sqr
- SqrFakeFp16
- Sqrt
- SquaredL2Distance
- SquaredL2DistanceGradient
- Squeeze
- StatRegistryCreate
- StatRegistryExport
- StatRegistryUpdate
- StdDevPut
- StopGradient
- Storm
- StringIndexCreate
- StringJoin
- StringPrefix
- StringSuffix
- StumpFunc
- StumpFuncIndex
- SubFakeFp16
- SubGradient
- SumFakeFp16
- SumInt
- SumRelu
- Summarize
- SwapBestPath
- Swish

- SwishGradient
- TT
- TTContraction
- TTContractionGradient
- TTLinearGradient
- TTPad
- TTPadGradient
- TanhFakeFp16
- TanhFakeFp16NNPI
- TensorProtosDBInput
- TensorVectorSize
- TextFileReaderRead
- ThrowChildThreadException
- ThrowException
- TimerBegin
- TimerEnd
- TimerGet
- TimerGetAndEnd
- TrimDataset
- UnPackRecords
- UniformFill
- UniformIntFill
- UniqueUniformFill
- UnsortedSegmentMean
- UnsortedSegmentMeanGradient
- UnsortedSegmentSum
- UnsortedSegmentSumGradient
- UnsortedSegmentWeightedSum
- UnsortedSegmentWeightedSumGradient
- VariableLengthSequencePadding
- VideoInput
- ViterbiPath
- WallClockTime
- WeightScale
- WeightedMultiSampling
- WeightedSample
- WeightedSampleDequeueBlobs
- WeightedSigmoidCrossEntropyWithLogits
- WeightedSigmoidCrossEntropyWithLogitsGradient
- While
- XavierFill
- Xor
- YellowFin
- ZeroGradient

## Covered operators

There are 220 covered operators

- Acos
- AcosGradient
- Adadelta
- Adagrad
- AddPadding
- AffineChannel
- AffineChannelGradient
- ArgMax
- ArgMin
- Asin
- AsinGradient
- Atan
- AtanGradient
- AveragedLoss
- AveragedLossGradient
- BBoxTransform
- BatchBoxCox
- BatchBucketOneHot
- BatchBucketize
- BatchDenseToSparse
- BatchGather
- BatchGatherGradient
- BatchMatMul
- BatchMoments
- BatchMomentsGradient
- BatchOneHot
- BatchSparseToDense
- BernoulliJSD
- BernoulliJSDGradient
- BooleanMask
- BooleanUnmask
- BoxWithNMSLimit
- CTCBeamSearchDecoder
- CTCGreedyDecoder
- Ceil
- ChannelBackpropStats
- ChannelShuffle
- ChannelShuffleGradient
- ChannelStats
- Clip
- ClipGradient
- ClipTensorByScaling

- CollectAndDistributeFpnRpnProposals
- ColwiseMax
- ColwiseMaxGradient
- Concat
- Conditional
- ConstantFill
- Conv
- ConvGradient
- Cosh
- CoshGradient
- CosineEmbeddingCriterion
- CosineEmbeddingCriterionGradient
- DiagonalFill
- DotProduct
- DotProductGradient
- Dropout
- DropoutGrad
- ElementwiseLinear
- ElementwiseLinearGradient
- Elu
- EluGradient
- Erf
- ErfGradient
- Expand
- ExpandGradient
- FC
- FCGradient
- Find
- FindDuplicateElements
- FlexibleTopK
- FlexibleTopKGradient
- Floor
- GRUUnit
- GRUUnitGradient
- Gather
- GatherPadding
- GatherRanges
- GatherRangesToDense
- Glu
- GroupNorm
- GroupNormGradient
- IndexHash
- InstanceNorm
- InstanceNormGradient
- IntegralImage
- IntegralImageGradient



- IsMemberOf
- LC
- LCGradient
- LayerNormGradient
- LeakyRelu
- LeakyReluGradient
- LearningRate
- LearningRateAdaption
- LengthsGather
- LengthsPad
- LengthsRangeFill
- LengthsSplit
- LengthsSum
- LengthsTile
- LengthsToRanges
- LengthsTopK
- LengthsTopKGradient
- Log
- MarginRankingCriterion
- MarginRankingCriterionGradient
- MatMul
- Max
- MaxGradient
- Mean
- MeanGradient
- MergeIdLists
- Min
- MinGradient
- Moments
- MomentsGradient
- MomentumSGD
- Mul
- NanCheck
- NegateGradient
- Negative
- NumpyTile
- ONNXWhile
- OneHot
- PackRNNSequence
- PackSegments
- PadImage
- PadImageGradient
- PairWiseLoss
- PairWiseLossGradient
- PiecewiseLinearTransform
- Pow

- RecurrentNetwork
- RecurrentNetworkGradient
- ReduceBackMax
- ReduceBackMaxGradient
- ReduceBackMean
- ReduceBackMeanGradient
- ReduceFrontMax
- ReduceFrontMaxGradient
- ReduceFrontMean
- ReduceFrontMeanGradient
- ReduceFrontSum
- ReduceFrontSumGradient
- ReduceL2
- ReduceL2Gradient
- ReduceMax
- ReduceMaxGradient
- ReduceMean
- ReduceMeanGradient
- ReduceMin
- ReduceMinGradient
- Relu
- ReluGradient
- ReluN
- ReluNGradient
- RemoveDataBlocks
- ReversePackedSegs
- RowWiseSparseAdagrad
- RowwiseMax
- RowwiseMaxGradient
- ScatterAssign
- ScatterWeightedSum
- SegmentOneHot
- Selu
- SeluGradient
- SequenceMask
- Sign
- Sinh
- SinhGradient
- SinusoidPositionEncoding
- Size
- Slice
- SliceGradient
- Softmax
- SoftmaxGradient
- SoftmaxWithLoss
- SoftmaxWithLossGradient

- SparseAdadelta
- SparseAdagrad
- SparseMomentumSGDUpdate
- SparseWngrad
- SpatialBN
- SpatialBNGradient
- SpatialSoftmaxWithLoss
- SpatialSoftmaxWithLossGradient
- Split
- SplitByLengths
- SquareRootDivide
- StringEndsWith
- StringStartsWith
- Sub
- Sum
- SumElements
- SumElementsGradient
- SumElementsInt
- SumReduceLike
- SumSqrElements
- Tan
- TanGradient
- Tanh
- TanhGradient
- ThresholdedRelu
- ThresholdedReluGradient
- Tile
- TileGradient
- TopK
- TopKGradient
- Transpose
- Unique
- UnpackRNNSequence
- UnpackSegments
- UpsampleBilinear
- UpsampleBilinearGradient
- WeightedSum
- WeightedSumGradient
- Where
- Wngrad

## Excluded from coverage statistics

### Schemaless operators

There are 3 schemaless operators

- C10LayerNorm\_\_DontUseThisOpYet
- LengthsSumFakeFp16
- SparseLengthsMax