

# C++ / Python API parity tracker

## torch::nn

API	Implementation Parity	Doc Parity
torch::nn::Sequential	Yes	No
torch::nn::ModuleList	Yes	No
torch::nn::ModuleDict	No	No
torch::nn::ParameterList	No	No
torch::nn::ParameterDict	No	No
torch::nn::Conv1d	Yes	No
torch::nn::Conv2d	Yes	No
torch::nn::Conv3d	Yes	No
torch::nn::ConvTranspose1d	Yes	No
torch::nn::ConvTranspose2d	Yes	No
torch::nn::ConvTranspose3d	Yes	No
torch::nn::Unfold	Yes	No
torch::nn::Fold	Yes	No
torch::nn::MaxPool1d	Yes	No
torch::nn::MaxPool2d	Yes	No
torch::nn::MaxPool3d	Yes	No
torch::nn::MaxUnpool1d	Yes	No
torch::nn::MaxUnpool2d	Yes	No
torch::nn::MaxUnpool3d	Yes	No
torch::nn::AvgPool1d	Yes	No
torch::nn::AvgPool2d	Yes	No
torch::nn::AvgPool3d	Yes	No
torch::nn::FractionalMaxPool2d	Yes	No
torch::nn::FractionalMaxPool3d	Yes	No
torch::nn::LPPool1d	Yes	No
torch::nn::LPPool2d	Yes	No
torch::nn::AdaptiveMaxPool1d	Yes	No

torch::nn::AdaptiveMaxPool2d	Yes	No
torch::nn::AdaptiveMaxPool3d	Yes	No
torch::nn::AdaptiveAvgPool1d	Yes	No
torch::nn::AdaptiveAvgPool2d	Yes	No
torch::nn::AdaptiveAvgPool3d	Yes	No
torch::nn::ReflectionPad1d	Yes	No
torch::nn::ReflectionPad2d	Yes	No
torch::nn::ReflectionPad3d	Yes	No
torch::nn::ReplicationPad1d	Yes	No
torch::nn::ReplicationPad2d	Yes	No
torch::nn::ReplicationPad3d	Yes	No
torch::nn::ZeroPad2d	Yes	No
torch::nn::ConstantPad1d	Yes	No
torch::nn::ConstantPad2d	Yes	No
torch::nn::ConstantPad3d	Yes	No
torch::nn::ELU	Yes	No
torch::nn::Hardshrink	Yes	No
torch::nn::Hardtanh	Yes	No
torch::nn::LeakyReLU	Yes	No
torch::nn::LogSigmoid	Yes	No
torch::nn::Mish	Yes	No
torch::nn::MultiheadAttention	No	No
torch::nn::PReLU	Yes	No
torch::nn::ReLU	Yes	No
torch::nn::ReLU6	Yes	No
torch::nn::RReLU	Yes	No
torch::nn::SELU	Yes	No
torch::nn::CELU	Yes	No
torch::nn::GELU	Yes	No
torch::nn::SiLU	Yes	No
torch::nn::Sigmoid	Yes	No

torch::nn::Softplus	Yes	No
torch::nn::Softshrink	Yes	No
torch::nn::Softsign	Yes	No
torch::nn::Tanh	Yes	No
torch::nn::Tanhshrink	Yes	No
torch::nn::Threshold	Yes	No
torch::nn::GLU	Yes	No
torch::nn::Softmin	Yes	No
torch::nn::Softmax	Yes	No
torch::nn::Softmax2d	Yes	No
torch::nn::LogSoftmax	Yes	No
torch::nn::AdaptiveLogSoftmaxWithLoss	Yes	No
torch::nn::BatchNorm1d	Yes	No
torch::nn::BatchNorm2d	Yes	No
torch::nn::BatchNorm3d	Yes	No
torch::nn::GroupNorm	Yes	No
torch::nn::SyncBatchNorm	No	No
torch::nn::InstanceNorm1d	Yes	No
torch::nn::InstanceNorm2d	Yes	No
torch::nn::InstanceNorm3d	Yes	No
torch::nn::LayerNorm	Yes	No
torch::nn::LocalResponseNorm	Yes	No
torch::nn::CrossMapLRN2d	Yes	No
torch::nn::RNN	Yes	No
torch::nn::LSTM	Yes	No
torch::nn::GRU	Yes	No
torch::nn::RNNCell	Yes	No
torch::nn::LSTMCell	Yes	No
torch::nn::GRUCell	Yes	No
torch::nn::Transformer	Yes	No
torch::nn::TransformerEncoder	No	No

torch::nn::TransformerDecoder	No	No
torch::nn::TransformerEncoderLayer	Yes	No
torch::nn::TransformerDecoderLayer	Yes	No
torch::nn::Identity	Yes	No
torch::nn::Linear	Yes	No
torch::nn::Bilinear	Yes	No
torch::nn::Flatten	Yes	No
torch::nn::Unflatten	Yes	No
torch::nn::Dropout	Yes	No
torch::nn::Dropout2d	Yes	No
torch::nn::Dropout3d	Yes	No
torch::nn::AlphaDropout	Yes	No
torch::nn::FeatureAlphaDropout	Yes	No
torch::nn::Embedding	Yes	No
torch::nn::EmbeddingBag	Yes	No
torch::nn::CosineSimilarity	Yes	No
torch::nn::PairwiseDistance	Yes	No
torch::nn::L1Loss	Yes	No
torch::nn::MSELoss	Yes	No
torch::nn::CrossEntropyLoss	Yes	No
torch::nn::CTCLoss	Yes	No
torch::nn::NLLLoss	Yes	No
torch::nn::PoissonNLLLoss	Yes	No
torch::nn::KLDivLoss	Yes	No
torch::nn::BCELoss	Yes	No
torch::nn::BCEWithLogitsLoss	Yes	No
torch::nn::MarginRankingLoss	Yes	No
torch::nn::HingeEmbeddingLoss	Yes	No
torch::nn::MultiLabelMarginLoss	Yes	No
torch::nn::SmoothL1Loss	Yes	No
torch::nn::HuberLoss	Yes	No

torch::nn::SoftMarginLoss	Yes	No
torch::nn::MultiLabelSoftMarginLoss	Yes	No
torch::nn::CosineEmbeddingLoss	Yes	No
torch::nn::MultiMarginLoss	Yes	No
torch::nn::TripletMarginLoss	Yes	No
torch::nn::PixelShuffle	Yes	No
torch::nn::PixelUnshuffle	Yes	No
torch::nn::Upsample	Yes	No
torch::nn::DataParallel	No	No
torch::nn::parallel::DistributedDataParallel	No	No
torch::nn::utils::clip_grad_norm_	Yes	No
torch::nn::utils::clip_grad_value_	Yes	No
torch::nn::utils::parameters_to_vector	Yes	No
torch::nn::utils::vector_to_parameters	Yes	No
torch::nn::utils::weight_norm	No	No
torch::nn::utils::remove_weight_norm	No	No
torch::nn::utils::spectral_norm	No	No
torch::nn::utils::remove_spectral_norm	No	No
torch::nn::utils::rnn::PackedSequence	Yes	No
torch::nn::utils::rnn::pack_padded_sequence	Yes	No
torch::nn::utils::rnn::pad_packed_sequence	Yes	No
torch::nn::utils::rnn::pad_sequence	Yes	No
torch::nn::utils::rnn::pack_sequence	Yes	No
torch::nn::SampleModule	Yes	Yes

## torch::nn::functional

API	Implementation Parity	Doc Parity
F::conv1d	Yes	No
F::conv2d	Yes	No
F::conv3d	Yes	No
F::conv_transpose1d	Yes	No

F::conv_transpose2d	Yes	No
F::conv_transpose3d	Yes	No
F::unfold	Yes	No
F::fold	Yes	No
F::avg_pool1d	Yes	No
F::avg_pool2d	Yes	No
F::avg_pool3d	Yes	No
F::max_pool1d	Yes	No
F::max_pool2d	Yes	No
F::max_pool3d	Yes	No
F::max_unpool1d	Yes	No
F::max_unpool2d	Yes	No
F::max_unpool3d	Yes	No
F::lp_pool1d	Yes	No
F::lp_pool2d	Yes	No
F::adaptive_max_pool1d	Yes	No
F::adaptive_max_pool2d	Yes	No
F::adaptive_max_pool3d	Yes	No
F::adaptive_avg_pool1d	Yes	No
F::adaptive_avg_pool2d	Yes	No
F::adaptive_avg_pool3d	Yes	No
F::threshold	Yes	No
F::relu	Yes	No
F::hardtanh	Yes	No
F::relu6	Yes	No
F::elu	Yes	No
F::selu	Yes	No
F::celu	Yes	No
F::leaky_relu	Yes	No
F::prelu	Yes	No
F::rrelu	Yes	No

F::glu	Yes	No
F::gelu	Yes	No
F::silu	Yes	No
F::mish	Yes	No
F::logsigmoid	Yes	No
F::hardshrink	Yes	No
F::tanhshrink	Yes	No
F::softsign	Yes	No
F::softplus	Yes	No
F::softmin	Yes	No
F::softmax	Yes	No
F::softshrink	Yes	No
F::gumbel_softmax	Yes	No
F::log_softmax	Yes	No
F::batch_norm	Yes	No
F::instance_norm	Yes	No
F::layer_norm	Yes	No
F::local_response_norm	Yes	No
F::normalize	Yes	No
F::linear	Yes	No
F::bilinear	Yes	No
F::dropout	Yes	No
F::alpha_dropout	Yes	No
F::dropout2d	Yes	No
F::dropout3d	Yes	No
F::embedding	Yes	No
F::embedding_bag	Yes	No
F::one_hot	Yes	No
F::pairwise_distance	Yes	No
F::cosine_similarity	Yes	No

F::pdist	Yes	No
F::binary_cross_entropy	Yes	No
F::binary_cross_entropy_with_logits	Yes	No
F::poisson_nll_loss	Yes	No
F::cosine_embedding_loss	Yes	No
F::cross_entropy	Yes	No
F::ctc_loss	Yes	No
F::hinge_embedding_loss	Yes	No
F::kl_div	Yes	No
F::l1_loss	Yes	No
F::mse_loss	Yes	No
F::margin_ranking_loss	Yes	No
F::multilabel_margin_loss	Yes	No
F::multilabel_soft_margin_loss	Yes	No
F::multi_margin_loss	Yes	No
F::nll_loss	Yes	No
F::smooth_l1_loss	Yes	No
F::huber_loss	Yes	No
F::soft_margin_loss	Yes	No
F::triplet_margin_loss	Yes	No
F::pixel_shuffle	Yes	No
F::pad	Yes	No
F::interpolate	Yes	No
F::grid_sample	Yes	No
F::affine_grid	Yes	No
F::sample_functional	Yes	No