

Swift for TensorFlow 0.8 Release Notes

Supported Configuration

- Swift for TensorFlow 0.8 uses TensorFlow 2.1.0.

API Changes

- The ``bias`` parameter for ``Dense`` and all convolutional layers is now optional. ([tensorflow/swift-apis#674](#))
- Deprecated method-style differential operators have been removed. Please use top-level differential operators instead. ([apple/swift#30108](#))

New Features

- TensorFlow v2 checkpoints can now be written and read by Swift models. ([tensorflow/swift-models#340](#))
- Differentiation now supports functions with ``inout`` parameters. ([apple/swift#30013](#))
 - Typing rules for ``inout`` parameter derivatives: [apple/swift#29959](#)
 - Standard library functions are now differentiable:
 - ``FloatingPoint`` operations: ``+=``, ``-=``, ``*=``, ``/=``
 - ``Array.append``
- ``@differentiable`` attribute may now be declared on ``set`` accessors. ([apple/swift#30178](#))
- Only public witnesses of ``@differentiable`` protocol requirements are required to have the same attribute. ([apple/swift#29771](#))

Known Issues

- Xcode toolchain: Starting with the 0.5 release, the Swift REPL is unable to print Tensors on macOS. Other platforms are unaffected. ([TF-940](#))
- If you are using the Package Manager support in Xcode, debugging will not work. This is because the debugger from the S4TF toolchain is not being used by Xcode. This is an Xcode issue and has been reported to Apple [here](#). The workaround is to use lldb from the S4TF toolchain on the command line. An alternative workaround is to generate an Xcode project from the swift package by running ``swift package generate-xcodeproj``.