

# Glossary: Advanced Keras Functional API

Welcome! This alphabetized glossary contains many of the terms you'll find within this course. This comprehensive glossary also includes additional industry-recognized terms not used in course videos. These terms are important for you to recognize when working in the industry, participating in user groups, and participating in other certificate programs.

| Term                             | Definition  |
|----------------------------------|---|
| <b>Build</b>                     | A method that creates the layer's weights, called once during the first invocation of the layer.  |
| <b>Call</b>                      | A method that defines the forward pass logic of the layer.  |
| <b>Custom layer</b>              | A user-defined layer that allows customization of operations in a neural network, providing flexibility for specific tasks and experimentation.   |
| <b>Eager execution</b>           | A TensorFlow feature that executes operations immediately, making it more intuitive and useful for debugging and interactive programming.   |
| <b>Init</b>                      | A method that initializes the layer's attributes.   |
| <b>Input layer</b>               | The first layer in a model that defines the input shape.  |
| <b>Keras</b>                     | A high-level neural network API written in Python that can run on top of TensorFlow, Theano, and CNTK.  |
| <b>Keras Functional API</b>      | A powerful API for creating complex models with multiple inputs and outputs, shared layers, and non-sequential data flows.  |
| <b>Keras Sequential API</b>      | Creates models with layers in a linear stack.   |
| <b>ReLU</b>                      | An activation function that outputs the input directly if positive; otherwise, it outputs zero. Commonly used in hidden layers.   |
| <b>Shared layer</b>              | Helpful when applying the same transformation to multiple inputs.   |
| <b>Softmax</b>                   | An activation function suitable for classification tasks.   |
| <b>TensorFlow 2.x</b>            | An open-source platform for machine learning developed by Google, providing comprehensive tools to build and deploy machine learning models across various environments, from servers to edge devices.                |
| <b>TensorBoard</b>               | A visualization toolkit for TensorFlow that provides insights into the model training process, including metrics, graphs, and other useful data.  |
| <b>TensorFlow Extended (TFX)</b> | An end-to-end platform for deploying production ML pipelines. TFX provides tools for model deployment, monitoring, and management, ensuring that machine learning models perform reliably in production environments. |
| <b>TensorFlow Hub</b>            | A repository of reusable machine learning modules, which can be easily integrated into TensorFlow applications to accelerate development.   |
| <b>TensorFlow.js</b>             | A library for training and deploying machine learning models in JavaScript environments, such as web browsers and Node.js.  |
| <b>TensorFlow Lite</b>           | A lightweight framework for deploying machine learning models on mobile and embedded devices.   |



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