

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

