



Introduction to TensorFlow

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# Products using TensorFlow

## RankBrain

- **Organization:** Google
- **Domain:** Information Retrieval
- **Description:** A large-scale deployment of deep neural nets for search ranking on [www.google.com](http://www.google.com).

## Inception Image Classification Model

- **Organization:** Google
- **Description:** Baseline model and follow on research into highly accurate computer vision models, starting with the model that won the 2014 Imagenet image classification challenge

## SmartReply

- **Organization:** Google
- **Description:** Deep LSTM model to automatically generate email responses


## Massively Multitask Networks for Drug Discovery

- **Organization:** Google and Stanford University
- **Domain:** Drug discovery
- **Description:** A deep neural network model for identifying promising drug candidates.

# About TensorFlow

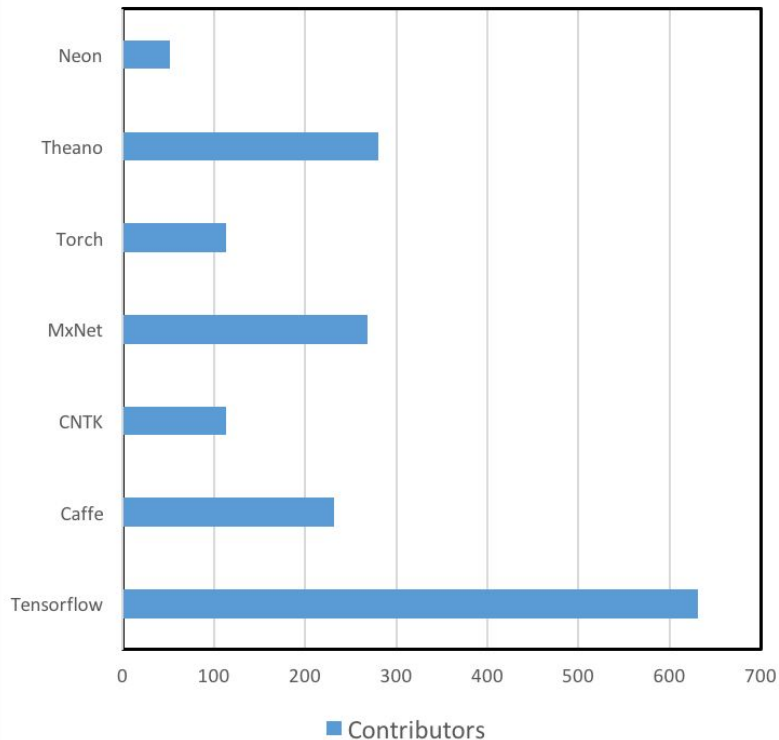
- TensorFlow™ is an open source software library for numerical computation using data flow graphs.
- Nodes in the graph represent mathematical operations, while the graph edges represent the multidimensional data arrays (tensors) communicated between them.
- The flexible architecture allows you to deploy computation to one or more CPUs or GPUs in a desktop, server, or mobile device with a single API.
- TensorFlow was originally developed by researchers and engineers working on the Google Brain Team within Google's Machine Intelligence research organization for the purposes of conducting machine learning and deep neural networks research, but the system is general enough to be applicable in a wide variety of other domains as well.

# TensorFlow compared to others

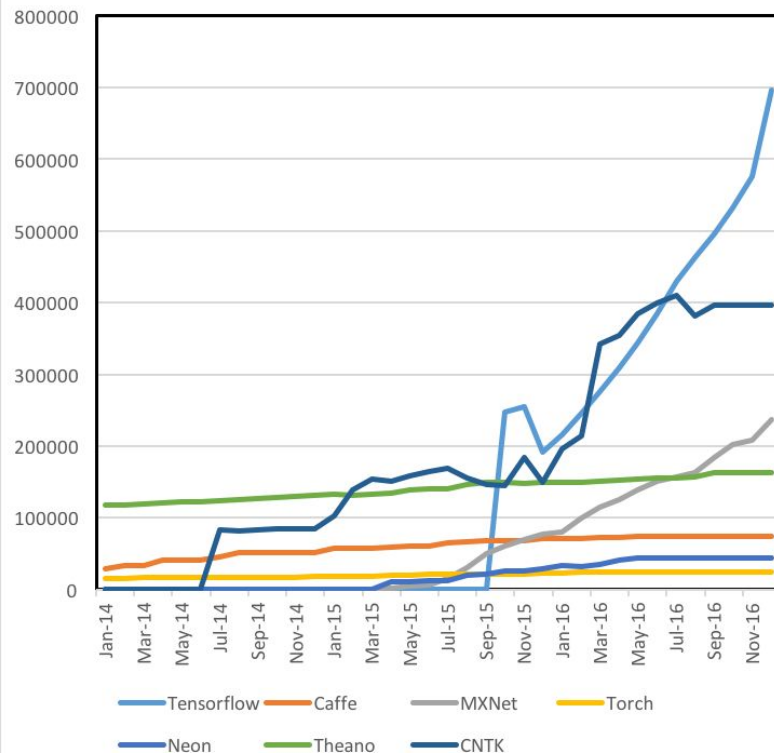
	Languages	Tutorials and training materials	CNN modeling capability	RNN modeling capability	Architecture: easy-to-use and modular front end	Speed	Multiple GPU support	Keras compatible
Theano	Python, C++	++	++	++	+	++	+	+
Tensor-Flow	Python	+++	+++	++	+++	++	++	+
Torch	Lua, Python (new)	+	+++	++	++	+++	++	
Caffe	C++	+	++		+	+	+	
MXNet	R, Python, Julia, Scala	++	++	+	++	++	+++	
Neon	Python	+	++	+	+	++	+	
CNTK	C++	+	+	+++	+	++	+	

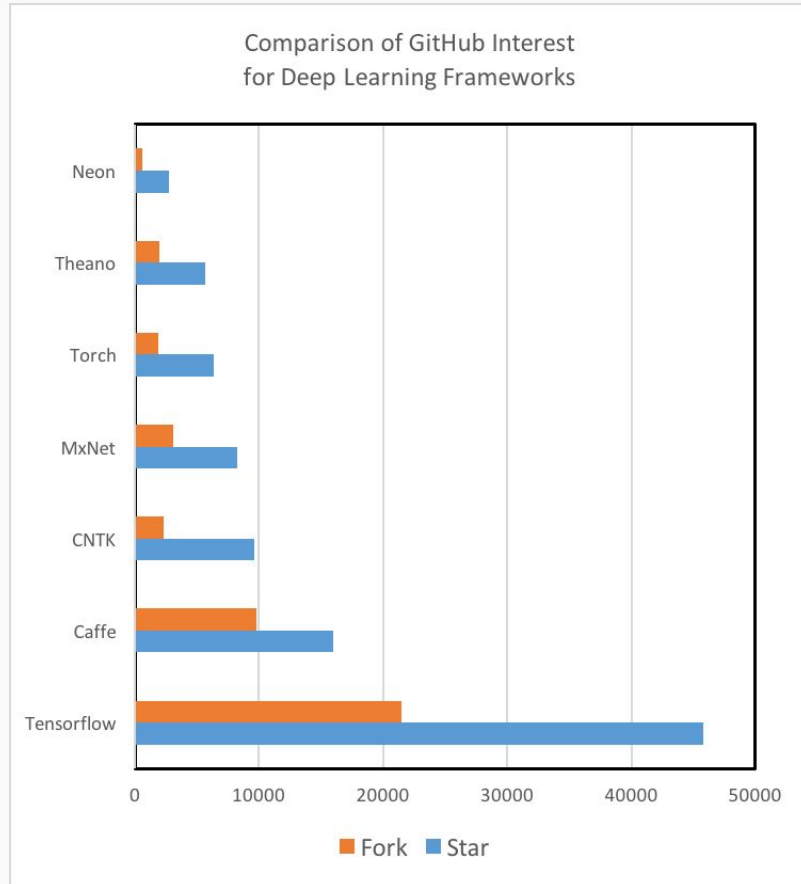
# TensorFlow in GitHub

Comparison of GitHub Contributors  
for Deep Learning Frameworks



Comparison of GitHub Commits  
for Deep Learning Frameworks





# Companies using TensorFlow



# Modules

- Getting Started with TensorFlow
- The TensorFlow Way
- TensorBoard
- Linear Regression
- Support Vector Machines
- Nearest Neighbour Methods
- Neural Networks
- Convolutional Neural Networks
- Recurrent Neural Networks
- TensorFlow at Production
- Keras & TensorFlow
- Projects



# Projects using TensorFlow

**Food Classification with Deep Learning in Tensorflow**

**Chatbot Application using CNN**

**Document Classification using TensorFlow**

**House Price prediction using TensorFlow**

# THANK YOU

Let us know how can we help your organization to Upskill the employees to stay updated in the ever-evolving IT Industry.

Get in touch:

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