// Protocol buffer representing the shape of tensors.

syntax = "proto3";

option cc\_enable\_arenas = true;

option java\_outer\_classname = "TensorShapeProtos";

option java\_multiple\_files = true;

option java\_package = "org.tensorflow.framework";

option go\_package = "github.com/tensorflow/tensorflow/tensorflow/go/core/framework/tensor\_shape\_go\_proto";

package tensorflow;

// Dimensions of a tensor.

message TensorShapeProto {

// One dimension of the tensor.

message Dim {

// Size of the tensor in that dimension.

// This value must be >= -1, but values of -1 are reserved for "unknown"

// shapes (values of -1 mean "unknown" dimension). Certain wrappers

// that work with TensorShapeProto may fail at runtime when deserializing

// a TensorShapeProto containing a dim value of -1.

int64 size = 1;

// Optional name of the tensor dimension.

string name = 2;

};

// Dimensions of the tensor, such as {"input", 30}, {"output", 40}

// for a 30 x 40 2D tensor. If an entry has size -1, this

// corresponds to a dimension of unknown size. The names are

// optional.

//

// The order of entries in "dim" matters: It indicates the layout of the

// values in the tensor in-memory representation.

//

// The first entry in "dim" is the outermost dimension used to layout the

// values, the last entry is the innermost dimension. This matches the

// in-memory layout of RowMajor Eigen tensors.

//

// If "dim.size()" > 0, "unknown\_rank" must be false.

repeated Dim dim = 2;

// If true, the number of dimensions in the shape is unknown.

//

// If true, "dim.size()" must be 0.

bool unknown\_rank = 3;

};