Cloud AutoML Vision Object Detection

REST Resource: projects.locations.datasets.tableSpecs.colu...

Resource: ColumnSpec

A representation of a column in a relational table. When listing them, column specs are returned in the same order in which they were given on import . Used by: * Tables

JSON representation

```
{
  "name": string,
  "dataType": {
    object (DataType (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1
  },
  "displayName": string,
  "dataStats": {
    object (DataStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v
  },
  "topCorrelatedColumns": [
    {
      object (CorrelatedColumn (https://cloud.google.com/vision/automl/object-detection/docs/refer
    }
  ],
  "etag": string
}
```

Fields

name	**string** Output only. The resource name of the column specs. Form: **projects/{project_id}/locations/{locationId}/datasets/{datasetId}/tableSpecs/{tableSpecId}/columnSpecs/{columnSpecId}**

Fields	
`dataType`	`object (`DataType (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType)`)` The data type of elements stored in the column.
`displayName`	`string` Output only. The name of the column to show in the interface. The name can be up to 100 characters long and can consist only of ASCII Latin letters A-Z and a-z, ASCII digits 0-9, underscores(_), and forward slashes(/), and must start with a letter or a digit.
`dataStats`	`object (`DataStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataStats)`)` Output only. Stats of the series of values in the column. This field may be stale, see the ancestor's Dataset.tables_dataset_metadata.stats_update_time field for the timestamp at which these stats were last updated.
`topCorrelatedColumns[]`	`object (`CorrelatedColumn (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.CorrelatedColumn)`)` Deprecated.
`etag`	`string` Used to perform consistent read-modify-write updates. If not set, a blind "overwrite" update happens.

DataType

Indicated the type of data that can be stored in a structured data entity (e.g. a table).

JSON representation

```
{
  "typeCode": enum (TypeCode (https://cloud.google.com/vision/automl/object-detection/docs/referen
  "nullable": boolean,

  // Union field details can be only one of the following:
  "listElementType": {
    object (DataType (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1
  },
  "structType": {
    object (StructType (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/
  },
  "timeFormat": string
  // End of list of possible types for union field details.
}
```

Fields

typeCode	**enum (TypeCode** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.TypeCode)**)** Required. The **TypeCode** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.TypeCode) for this type.
nullable	**boolean** If true, this DataType can also be **NULL**. In .CSV files **NULL** value is expressed as an empty string.
Union field **details**. Details of DataType-s that need additional specification. **details** can be only one of the following:	

Fields	
`listElementType`	**`object (DataType`** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType) **`)`** If **`typeCode`** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType.FIELDS.type_code) == **`ARRAY`** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.TypeCode.ENUM_VALUES.ARRAY), then **`listElementType`** is the type of the elements.
`structType`	**`object (StructType`** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.StructType) **`)`** If **`typeCode`** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType.FIELDS.type_code) == **`STRUCT`** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.TypeCode.ENUM_VALUES.STRUCT), then **`structType`** provides type information for the struct's fields.

Fields	
`timeFormat`	`string` If `typeCode` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType.FIELDS.type_code) == `TIMESTAMP` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.TypeCode.ENUM_VALUES.TIMESTAMP) then `timeFormat` provides the format in which that time field is expressed. The timeFormat must either be one of: * `UNIX_SECONDS` * `UNIX_MILLISECONDS` * `UNIX_MICROSECONDS` * `UNIX_NANOSECONDS` (for respectively number of seconds, milliseconds, microseconds and nanoseconds since start of the Unix epoch); or be written in `strftime` syntax. If timeFormat is not set, then the default format as described on the typeCode is used.

StructType

`StructType` defines the DataType-s of a `STRUCT` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.TypeCode.ENUM_VALUES.STRUCT) type.

JSON representation

```
{
  "fields": {
    string: {
      object(DataType (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v
    },
    ...
  }
}
```

Fields

Fields	
`fields`	`map (key: string, value: object (`DataType (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType) `))` Unordered map of struct field names to their data types. Fields cannot be added or removed via Update. Their names and data types are still mutable. An object containing a list of "`key`: `value` pairs. Example: { "`name`": "`wrench`", "`mass`": "`1.3kg`", "`count`": "`3`" }.

TypeCode

TypeCode is used as a part of **DataType** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType)

.

Enums	
`TYPE_CODE_UNSPECIFIED`	Not specified. Should not be used.
`FLOAT64`	Encoded as `number`, or the strings "`NaN`", "`Infinity`", or "`-Infinity`".
`TIMESTAMP`	Must be between 0AD and 9999AD. Encoded as `string` according to `timeFormat` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType.FIELDS.time_format) , or, if that format is not set, then in RFC 3339 `date-time` format, where `time-offset` = "`Z`" (e.g. 1985-04-12T23:20:50.52Z).
`STRING`	Encoded as `string`.

Enums	
ARRAY	Encoded as `list`, where the list elements are represented according to `listElementType` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType.FIELDS.list_element_type).
STRUCT	Encoded as `struct`, where field values are represented according to `structType` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataType.FIELDS.struct_type).
CATEGORY	Values of this type are not further understood by AutoML, e.g. AutoML is unable to tell the order of values (as it could with FLOAT64), or is unable to say if one value contains another (as it could with STRING). Encoded as `string` (bytes should be base64-encoded, as described in RFC 4648, section 4).

DataStats

The data statistics of a series of values that share the same DataType.

JSON representation

JSON representation

```
{
  "distinctValueCount": string,
  "nullValueCount": string,
  "validValueCount": string,

  // Union field stats can be only one of the following:
  "float64Stats": {
    object (Float64Stats (https://cloud.google.com/vision/automl/object-detection/docs/reference/re
  },
  "stringStats": {
    object (StringStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/res
  },
  "timestampStats": {
    object (TimestampStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/
  },
  "arrayStats": {
    object (ArrayStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/
  },
  "structStats": {
    object (StructStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/res
  },
  "categoryStats": {
    object (CategoryStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/r
  }
  // End of list of possible types for union field stats.
}
```

Fields

distinctValueCount	**string (int64 (https://developers.google.com/discovery/v1/type-format) format)** The number of distinct values.
nullValueCount	**string (int64 (https://developers.google.com/discovery/v1/type-format) format)** The number of values that are null.
validValueCount	**string (int64 (https://developers.google.com/discovery/v1/type-format) format)** The number of values that are valid.

Fields

Union field **stats**. The data statistics specific to a DataType. **stats** can be only one of the following:

float64Stats	**object (Float64Stats** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.Float64Stats) **)** The statistics for FLOAT64 DataType.
stringStats	**object (StringStats** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.StringStats) **)** The statistics for STRING DataType.
timestampStats	**object (TimestampStats** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.TimestampStats) **)** The statistics for TIMESTAMP DataType.
arrayStats	**object (ArrayStats** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.ArrayStats) **)** The statistics for ARRAY DataType.
structStats	**object (StructStats** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.StructStats) **)** The statistics for STRUCT DataType.

Fields	
categoryStats	**object (CategoryStats** (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.CategoryStats) **)** The statistics for CATEGORY DataType.

Float64Stats

The data statistics of a series of FLOAT64 values.

JSON representation

```
{
  "mean": number,
  "standardDeviation": number,
  "quantiles": [
    number
  ],
  "histogramBuckets": [
    {
      object (HistogramBucket (https://cloud.google.com/vision/automl/object-detection/docs/refere
    }
  ]
}
```

Fields	
mean	**number** The mean of the series.
standardDeviation	**number** The standard deviation of the series.

Fields	
`quantiles[]`	`number` Ordered from 0 to k k-quantile values of the data series of n values. The value at index i is, approximately, the i*n/k-th smallest value in the series; for i = 0 and i = k these are, respectively, the min and max values.
`histogramBuckets[]`	`object (`HistogramBucket (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.HistogramBucket)`)` Histogram buckets of the data series. Sorted by the min value of the bucket, ascendingly, and the number of the buckets is dynamically generated. The buckets are non-overlapping and completely cover whole FLOAT64 range with min of first bucket being "`-Infinity`", and max of the last one being "`Infinity`".

HistogramBucket

A bucket of a histogram.

JSON representation

```
{
  "min": number,
  "max": number,
  "count": string
}
```

Fields	
`min`	`number` The minimum value of the bucket, inclusive.
`max`	`number` The maximum value of the bucket, exclusive unless max = "`Infinity`", in which case it's inclusive.

Fields	
`count`	`string (int64` (https://developers.google.com/discovery/v1/type-format) `format)` The number of data values that are in the bucket, i.e. are between min and max values.

StringStats

The data statistics of a series of STRING values.

JSON representation

`{`
`  "topUnigramStats": [`
`  {`
`  object (UnigramStats` (https://cloud.google.com/vision/automl/object-detection/docs/reference/
`  }`
`  ]`
`}`

Fields	
`topUnigramStats[]`	`object (UnigramStats` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.UnigramStats) `)` The statistics of the top 20 unigrams, ordered by `count` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.UnigramStats.FIELDS.count).

UnigramStats

The statistics of a unigram.

JSON representation

```
{
  "value": string,
  "count": string
}
```

Fields	
`value`	`string` The unigram.
`count`	`string (int64` (https://developers.google.com/discovery/v1/type-format) `format)` The number of occurrences of this unigram in the series.

TimestampStats

The data statistics of a series of TIMESTAMP values.

JSON representation

```
{
  "granularStats": {
    string: {
      object(GranularStats)
    },
    ...
  }
}
```

Fields

Fields	
`granularStats`	`map (key: string, value: object (GranularStats))` The string key is the pre-defined granularity. Currently supported: hour_of_day, day_of_week, month_of_year. Granularities finer that the granularity of timestamp data are not populated (e.g. if timestamps are at day granularity, then hour_of_day is not populated). An object containing a list of `"key": value` pairs. Example: `{ "name": "wrench", "mass": "1.3kg", "count": "3" }`.

ArrayStats

The data statistics of a series of ARRAY values.

JSON representation

```
{
  "memberStats": {
    object (DataStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v
  }
}
```

Fields	
`memberStats`	`object (DataStats` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataStats) `)` Stats of all the values of all arrays, as if they were a single long series of data. The type depends on the element type of the array.

StructStats

The data statistics of a series of STRUCT values.

JSON representation

```
{
  "fieldStats": {
    string: {
      object(DataStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/
    },
    ...
  }
}
```

Fields

`fieldStats`	`map (key: string, value: object (`DataStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.DataStats) `))` Map from a field name of the struct to data stats aggregated over series of all data in that field across all the structs. An object containing a list of `"key": value` pairs. Example: `{ "name": "wrench", "mass": "1.3kg", "count": "3" }`.

CategoryStats

The data statistics of a series of CATEGORY values.

JSON representation

```
{
  "topCategoryStats": [
    {
      object (SingleCategoryStats (https://cloud.google.com/vision/automl/object-detection/docs/r
    }
  ]
}
```

Fields

Fields	
`topCategoryStats[]`	`object (SingleCategoryStats` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.SingleCategoryStats) `)` The statistics of the top 20 CATEGORY values, ordered by `count` (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.SingleCategoryStats.FIELDS.count).

SingleCategoryStats

The statistics of a single CATEGORY value.

JSON representation

```
{
  "value": string,
  "count": string
}
```

Fields	
`value`	`string` The CATEGORY value.
`count`	`string (int64` (https://developers.google.com/discovery/v1/type-format) `format)` The number of occurrences of this value in the series.

CorrelatedColumn

Identifies the table's column, and its correlation with the column this ColumnSpec describes.

JSON representation
{ "columnSpecId": string, "correlationStats": { object (CorrelationStats (https://cloud.google.com/vision/automl/object-detection/docs/referen } }

Fields	
columnSpecId	string The columnSpecId of the correlated column, which belongs to the same table as the in-context column.
correlationStats	object (CorrelationStats (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs#ColumnSpec.CorrelationStats)) Correlation between this and the in-context column.

CorrelationStats

A correlation statistics between two series of DataType values. The series may have differing DataType-s, but within a single series the DataType must be the same.

JSON representation
{ "cramersV": number }

Fields	
cramersV	number The correlation value using the Cramer's V measure.

Methods	
get (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs/get)	Gets a column spec.
list (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs/list)	Lists column specs in a table spec.
patch (https://cloud.google.com/vision/automl/object-detection/docs/reference/rest/v1beta1/projects.locations.datasets.tableSpecs.columnSpecs/patch)	Updates a column spec.