

Vector Functions

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Applies to:  Azure SQL Database  Azure SQL Managed Instance

The following scalar functions perform operations on vectors in binary format, allowing applications to store and manipulate vectors in SQL Server.

VECTOR_DISTANCE

Calculates the distance between two vectors using a specified distance metric.

VECTOR_NORM

Takes a vector as an input and returns the norm of the vector (which is a measure of its length or magnitude) in a given norm type .

VECTOR_NORMALIZE

Takes a vector as an input and returns the normalized vector, which is a vector scaled to have a length of 1 in a given norm type .

Warning

The following functions work with the `varbinary(8000)` datatype, and they will be phased out after the private preview, as the new **VECTOR** type is being introduced. These functions will remain available until the end of the private preview to assist early adopters in transitioning to the new vector type.

JSON_ARRAY_TO_VECTOR

Creates a vector from a JSON array.

ISVECTOR

Tests whether a binary contains a valid vector.

VECTOR_TO_JSON_ARRAY

Returns a vector as a JSON array.

See also

- [Vectors in SQL Server](#)
- [Vector Data Types](#)
- [Azure SQL DB Vector Search Samples](#)
- [Intelligent applications with Azure SQL Database](#)

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