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# **Azure Data Factory Function Cheat Sheet**

| Function          | Description        | Example  | Result                 |  |  |
|-------------------|--------------------|--|------------------------|--|--|
| Name              | Description        | Example  | Result                 |  |  |
| Name              | Date Functions     |  |                        |  |  |
| addDays           | Add a              | @addDays('2023-03-20T00:00:00Z',                 | "2023-03-22T00:00:00Z" |  |  |
| adubays           | number of          | 2)   | 2023-03-22100.00.002   |  |  |
|                   | days to a          |  |                        |  |  |
|                   | timestamp.         |  |                        |  |  |
| addHours          | Add a              | @addHours('2023-03-                              | "2023-03-20T03:00:00Z" |  |  |
|                   | number of          | 20T00:00:00Z', 3)                                |                        |  |  |
|                   | hours to a         | , ,  |                        |  |  |
|                   | timestamp.         |  |                        |  |  |
| <u>addMinutes</u> | Add a              | @addMinutes('2023-03-                            | "2023-03-20T00:30:00Z" |  |  |
|                   | number of          | 20T00:00:00Z', 30)                               |                        |  |  |
|                   | minutes to a       |  |                        |  |  |
|                   | timestamp.         |  |                        |  |  |
| <u>addSeconds</u> | Add a              | @addSeconds('2023-03-                            | "2023-03-20T00:00:45Z" |  |  |
|                   | number of          | 20T00:00:00Z', 45)                               |                        |  |  |
|                   | seconds to a       |  |                        |  |  |
| addToTime         | timestamp.         | @addTaTima/!2022.02                              | "2023-03-21T00:00:00Z" |  |  |
| addionine         | Add a number of    | @addToTime('2023-03-<br>20T00:00:00Z', 1, 'day') | 2023-03-21100.00.002   |  |  |
|                   | time units to      | 20100.002, 1, day j                              |                        |  |  |
|                   | a timestamp.       |  |                        |  |  |
|                   | See                |  |                        |  |  |
|                   | also getFutur      |  |                        |  |  |
|                   | eTime.             |  |                        |  |  |
| convertFrom       | Convert a          | @convertFromUtc('2023-03-                        | "2023-03-20T05:00:00"  |  |  |
| <u>Utc</u>        | timestamp          | 20T12:00:00Z', 'Pacific Standard                 |                        |  |  |
|                   | from               | Time')   |                        |  |  |
|                   | Universal          |  |                        |  |  |
|                   | Time               |  |                        |  |  |
|                   | Coordinated        |  |                        |  |  |
|                   | (UTC) to the       |  |                        |  |  |
|                   | target time        |  |                        |  |  |
| convertTime       | zone.<br>Convert a | @convertTimeZone('2023-03-                       | "2023-03-20T04:00:00"  |  |  |
| Zone              | timestamp          | 20T12:00:00', 'UTC', 'Pacific Standard           | 2023-03-20104.00.00    |  |  |
| 20116             | from the           | Time')   |                        |  |  |
|                   | source time        | , , , , , , , , , , , , , , , , , , ,            |                        |  |  |
|                   | 1 30 at 50 tillio  |  | l                      |  |  |



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|--------------------|------------------|---------------------------------|------------------------|
|                    | zone to the      |                                 |                        |
|                    | target time      |                                 |                        |
|                    | zone.            |                                 |                        |
| <u>convertToUt</u> | Convert a        | @convertToUtc('2023-03-         | "2023-03-20T19:00:00Z" |
| <u>C</u>           | timestamp        | 20T12:00:00', 'Pacific Standard |                        |
|                    | from the         | Time')                          |                        |
|                    | source time      |                                 |                        |
|                    | zone to          |                                 |                        |
|                    | Universal        |                                 |                        |
|                    | Time             |                                 |                        |
|                    | Coordinated      |                                 |                        |
|                    | (UTC).           |                                 |                        |
| dayOfMonth         | Return the       | @dayOfMonth('2023-03-           | 20                     |
|                    | day of the       | 20T00:00:00Z')                  |                        |
|                    | month            |                                 |                        |
|                    | component        |                                 |                        |
|                    | from a           |                                 |                        |
|                    | timestamp.       |                                 |                        |
| dayOfWeek          | Return the       | @dayOfWeek('2023-03-            | 1 (Monday)             |
|                    | day of the       | 20T00:00:00Z')                  |                        |
|                    | week             | ·                               |                        |
|                    | component        |                                 |                        |
|                    | from a           |                                 |                        |
|                    | timestamp.       |                                 |                        |
| dayOfYear          | Return the       | @dayOfYear('2023-03-            | 79                     |
|                    | day of the       | 20T00:00:00Z')                  |                        |
|                    | year             |                                 |                        |
|                    | component        |                                 |                        |
|                    | from a           |                                 |                        |
|                    | timestamp.       |                                 |                        |
| formatDateT        | Return the       | @formatDateTime('2023-03-       | "2023-03-20"           |
| ime                | timestamp as     | 20T12:00:00Z', 'yyyy-MM-dd')    |                        |
|                    | a string in      |                                 |                        |
|                    | optional         |                                 |                        |
|                    | format.          |                                 |                        |
| getFutureTi        | Return the       | @getFutureTime(5, 'Day')        | "2023-03-29T12:00:00Z" |
| <u>me</u>          | <u>current</u>   |                                 | (assuming current UTC  |
|                    | <u>timestamp</u> |                                 | time is 2023-03-       |
|                    | plus the         |                                 | 24T12:00:00Z)          |
|                    | <u>specified</u> |                                 |                        |
|                    | time units.      |                                 |                        |



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|                    |                | T                               |                        |
|--------------------|----------------|---------------------------------|------------------------|
|                    | <u>See</u>     |                                 |                        |
|                    | also addToTi   |                                 |                        |
|                    | me.            |                                 |                        |
| getPastTime        | Return the     | @getPastTime(5, 'Day')          | "2023-03-19T12:00:00Z" |
|                    | current        |                                 | (assuming current UTC  |
|                    | timestamp      |                                 | time is 2023-03-       |
|                    | minus the      |                                 | 24T12:00:00Z)          |
|                    | specified      |                                 | ,                      |
|                    | time units.    |                                 |                        |
|                    | See            |                                 |                        |
|                    | also subtract  |                                 |                        |
|                    |                |                                 |                        |
| 1000               | FromTime.      | O 1 - 10[D - ( 2022 02          |                        |
| startOfDay         | Return the     | @startOfDay('2023-03-           | "2023-03-20T00:00:00Z" |
|                    | start of the   | 20T12:00:00Z')                  |                        |
|                    | day for a      |                                 |                        |
|                    | timestamp.     |                                 |                        |
| <u>startOfHour</u> | Return the     | @startOfHour('2023-03-          | "                      |
|                    | start of the   | 20T12:34:56Z')                  |                        |
|                    | hour for a     |                                 |                        |
|                    | timestamp.     |                                 |                        |
| startOfMont        | Return the     | @startOfMonth('2023-03-         | "2023-03-01T00:00:00Z" |
| <u>h</u>           | start of the   | 20T00:00:00Z')                  |                        |
|                    | month for a    |                                 |                        |
|                    | timestamp.     |                                 |                        |
| subtractFro        | Subtract a     | @subtractFromTime('2023-03-     | "2023-03-19T00:00:00Z" |
| mTime              | number of      | 20T00:00:00Z', 1, 'day')        |                        |
|                    | time units     | , , , , ,                       |                        |
|                    | from a         |                                 |                        |
|                    | timestamp.     |                                 |                        |
|                    | See            |                                 |                        |
|                    | also getPastT  |                                 |                        |
|                    |                |                                 |                        |
| ticks              | ime.<br>Return | @ticks('2023-03-20T00:00:00Z')  | 637841088000000000     |
| LICKS              |                | @ ticks( 2023-03-20100.00.002 ) | 03/041000000000000     |
|                    | the ticks pro  |                                 |                        |
|                    | perty value    |                                 |                        |
|                    | for a          |                                 |                        |
|                    | specified      |                                 |                        |
|                    | timestamp.     |                                 |                        |
| <u>utcNow</u>      | Return the     | @utcNow()                       | "2023-03-              |
|                    | current        |                                 | 24T12:34:56.789Z"      |
|                    |                |                                 |                        |



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|                | timestamp as a string.   |  | (assuming the current UTC time)  |
|----------------|--|--|--|
|                |  | String Functions                           |  |
| concat         | Combine two or more strings, and return the combined string.         | @concat('Hello', ' ', 'World')             | "Hello World"  |
| endsWith       | Check whether a string ends with the specified substring.            | @endsWith('Hello World', 'World')          | true   |
| guid           | Generate a globally unique identifier (GUID) as a string.            | @guid()                                    | "c5f5b5a5-5f5e-4f5d-<br>5a5f-5b5c5d5e5f5g"<br>(randomly generated<br>GUID) |
| indexOf        | Return the starting position for a substring.                        | @indexOf('Hello World', 'World')           | 6  |
| lastIndexOf    | Return the starting position for the last occurrence of a substring. | @lastIndexOf('Hello World World', 'World') | 12   |
| <u>replace</u> | Replace a substring with the specified string, and return the        | @replace('Hello World', 'World', 'ADF')    | "Hello ADF"  |



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|            | updated string.  |                                     |                    |
|------------|--|-------------------------------------|--------------------|
| split      | Return an array that contains substrings, separated by commas, from a larger string based on a specified delimiter character in the original string. | @split('Hello,World', ',')          | ["Hello", "World"] |
| startsWith | Check whether a string starts with a specific substring.   | @startsWith('Hello World', 'Hello') | true               |
| substring  | Return characters from a string, starting from the specified position.   | @substring('Hello World', 0, 5)     | "Hello"            |
| toLower    | Return a string in lowercase format.   | @toLower('Hello World')             | "hello world"      |
| toUpper    | Return a string in uppercase format.   | @toUpper('Hello World')             | "HELLO WORLD"      |
| trim       | Remove leading and trailing whitespace from a string,  | @trim(' Hello World ')              | "Hello World"      |



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|              | and return<br>the updated<br>string.  |   |                |
|--------------|---|---|----------------|
|              |   | Collection Functions                            |                |
| contains     | Check whether a collection has a specific item.   | @contains('Hello World', 'World')               | true           |
| <u>empty</u> | Check<br>whether a<br>collection is<br>empty.   | @empty('')                                      | true           |
| first        | Return the first item from a collection.  | @first(['Hello', 'World'])                      | "Hello"        |
| intersection | Return a collection that has only the common items across the specified collections.        | @intersection(['A', 'B', 'C'], ['B', 'C', 'D']) | ["B", "C"]     |
| join         | Return a string that has all the items from an array, separated by the specified character. | @join(['Hello', 'World'], ', ')                 | "Hello, World" |
| last         | Return the last item from a collection.   | @last(['Hello', 'World'])                       | "World"        |
| length       | Return the number of items in a   | @length('Hello World')                          | 11             |



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|                     |   |  | Г                    |
|---------------------|---|--|----------------------|
|                     | string or   |  |                      |
|                     | array.  |  |                      |
| <u>skip</u>         | Remove  | @skip(['A', 'B', 'C', 'D'], 2)           | ["C", "D"]           |
|                     | items from  |  |                      |
|                     | the front of a  |  |                      |
|                     | collection,   |  |                      |
|                     | and   |  |                      |
|                     | return <i>all the</i>   |  |                      |
|                     | other items.  |  |                      |
| <u>take</u>         | Return items  | @take(['A', 'B', 'C', 'D'], 2)           | ["A", "B"]           |
|                     | from the  |  |                      |
|                     | front of a  |  |                      |
|                     | collection.   |  |                      |
| <u>union</u>        | Return a  | @union(['A', 'B', 'C'], ['B', 'C', 'D']) | ["A", "B", "C", "D"] |
|                     | collection  |  |                      |
|                     | that  |  |                      |
|                     | has <i>all</i> the  |  |                      |
|                     | items from  |  |                      |
|                     | the specified   |  |                      |
|                     | collections.  |  |                      |
|                     |   | Logical Function                         |                      |
| and                 | Check   | @and(true, false)                        | false                |
|                     | whether all   |  |                      |
|                     | expressions   |  |                      |
|                     | are true.   |  |                      |
| equals              | Check   | @equals(5, 5)                            | true                 |
|                     | whether   |  |                      |
|                     | both values   |  |                      |
|                     | are   |  |                      |
|                     | equivalent.   |  |                      |
| greater             | Check   | @greater(5, 3)                           | true                 |
|                     | whether the   |  |                      |
|                     | first value is  |  |                      |
|                     | greater than  |  |                      |
|                     | the second  |  |                      |
|                     | value.  |  |                      |
| greaterOrEq         | Check   | @greaterOrEquals(5, 5)                   | true                 |
|                     | whether the   |  |                      |
|                     | first value is  |  |                      |
|                     | greater than  |  |                      |
| 1                   | or equal to   |  |                      |
| greaterOrEq<br>uals | the second value. Check whether the first value is greater than | @greaterOrEquals(5, 5)                   | true                 |



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|              | the second value.  |                              |                    |  |  |
|--------------|--|------------------------------|--------------------|--|--|
| <u>if</u>    | Check whether an expression is true or false. Based on the result, return a specified value. | @if(true, 'True', 'False')   | "True"             |  |  |
| less         | Check whether the first value is less than the second value.                                 | @less(3, 5)                  | true               |  |  |
| lessOrEquals | Check whether the first value is less than or equal to the second value.                     | @lessOrEquals(5, 5)          | true               |  |  |
| not          | Check<br>whether an<br>expression is<br>false.   | @not(true)                   | false              |  |  |
| or           | Check whether at least one expression is true.   | @or(true, false)             | true               |  |  |
|              | Conversion Functions   |                              |                    |  |  |
| array        | Return an array from a single specified input. For multiple inputs,                          | @array('["Hello", "World"]') | ["Hello", "World"] |  |  |



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|                 | saa creataArr  |  |                           |
|-----------------|----------------|--|---------------------------|
|                 | see createArr  |  |                           |
|                 | <u>ay.</u>     |  |                           |
| base64          | Return the     | @base64('Hello World')                           | "SGVsbG8gV29ybGQ="        |
|                 | base64-        |  |                           |
|                 | encoded        |  |                           |
|                 | version for a  |  |                           |
|                 | string.        |  |                           |
| base64ToBin     | Return the     |  | Binary representation of  |
| <u>ary</u>      | binary         | @base64ToBinary('SGVsbG8gV29yb                   | "Hello World"             |
|                 | version for a  | GQ=')  |                           |
|                 | base64-        |  |                           |
|                 | encoded        |  |                           |
|                 | string.        |  |                           |
| base64ToStri    | Return the     |  | "Hello World"             |
| <u>ng</u>       | string version | @base64ToString('SGVsbG8gV29ybG                  |                           |
|                 | for a base64-  | Q=')   |                           |
|                 | encoded        |  |                           |
|                 | string.        |  |                           |
| <u>binary</u>   | Return the     | @binary('Hello World')                           | Binary representation of  |
|                 | binary         |  | "Hello World"             |
|                 | version for    |  |                           |
|                 | an input       |  |                           |
|                 | value.         |  |                           |
| bool            | Return the     | @bool('true')                                    | true                      |
|                 | Boolean        |  |                           |
|                 | version for    |  |                           |
|                 | an input       |  |                           |
|                 | value.         |  |                           |
| <u>coalesce</u> | Return the     | <pre>@coalesce(null, 'Hello', 'World')</pre>     | "Hello"                   |
|                 | first non-null |  |                           |
|                 | value from     |  |                           |
|                 | one or more    |  |                           |
|                 | parameters.    |  |                           |
| createArray     | Return an      | <pre>@createArray('Hello', 'World')</pre>        | ["Hello", "World"]        |
|                 | array from     |  |                           |
|                 | multiple       |  |                           |
|                 | inputs.        |  |                           |
| <u>dataUri</u>  | Return the     | <pre>@dataUri('text/plain', 'Hello World')</pre> |                           |
|                 | data URI for   |  | "data:text/plain;base64,S |
|                 | an input       |  | GVsbG8gV29ybGQ="          |
|                 | value.         |  |                           |



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|--------------------------|---|---|---|
| dataUriToBin<br>ary      | Return the binary version for a data URI.   | @dataUriToBinary('data:text/plain;b<br>ase64,SGVsbG8gV29ybGQ=') | Binary representation of<br>"Hello World" |
| dataUriToStr<br>ing      | Return the<br>string version<br>for a data<br>URI.  | @dataUriToString('data:text/plain;base64,SGVsbG8gV29ybGQ=')     | "Hello World"                             |
| decodeBase6<br>4         | Return the<br>string version<br>for a base64-<br>encoded<br>string.                           | @decodeBase64('SGVsbG8gV29ybG<br>Q=')                           | "Hello World"                             |
| decodeData<br><u>Uri</u> | Return the binary version for a data URI.   | @decodeDataUri('data:text/plain;ba<br>se64,SGVsbG8gV29ybGQ=')   | "Hello World"                             |
| decodeUriCo<br>mponent   | Return a<br>string that<br>replaces<br>escape<br>characters<br>with<br>decoded<br>versions.   | @decodeUriComponent('Hello%20W<br>orld')                        | "Hello World"                             |
| encodeUriCo<br>mponent   | Return a<br>string that<br>replaces<br>URL-unsafe<br>characters<br>with escape<br>characters. | @encodeUriComponent('Hello<br>World')                           | "Hello%20World"                           |
| float                    | Return a<br>floating point<br>number for<br>an input<br>value.                                | @float('3.14')  | 3.14                                      |
| int                      | Return the integer version for a string.  | @int('5')   | 5   |



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|-------------|----------------|----------------------------------|--------------------------|
| <u>json</u> | Return the     | @json('{"hello": "world"}')      | {"hello": "world"}       |
|             | JavaScript     |                                  |                          |
|             | Object         |                                  |                          |
|             | Notation       |                                  |                          |
|             | (JSON) type    |                                  |                          |
|             | value or       |                                  |                          |
|             | object for a   |                                  |                          |
|             | string or      |                                  |                          |
|             | XML.           |                                  |                          |
| string      | Return the     | @string(42)                      | "42"                     |
|             | string version |                                  |                          |
|             | for an input   |                                  |                          |
|             | value.         |                                  |                          |
| uriCompone  | Return the     | @uriComponent('Hello%20World')   | "Hello%20World"          |
| nt          | URI-encoded    | , , ,                            |                          |
|             | version for    |                                  |                          |
|             | an input       |                                  |                          |
|             | value by       |                                  |                          |
|             | replacing      |                                  |                          |
|             | URL-unsafe     |                                  |                          |
|             | characters     |                                  |                          |
|             | with escape    |                                  |                          |
|             | characters.    |                                  |                          |
| uriCompone  | Return the     |                                  | Binary representation of |
| ntToBinary  | binary         | @uriComponentToBinary('Hello%20  | "Hello World"            |
|             | version for a  | World')                          |                          |
|             | URI-encoded    | ,                                |                          |
|             | string.        |                                  |                          |
| uriCompone  | Return the     |                                  | "Hello World"            |
| ntToString  | string version | @uriComponentToString('Hello%20  |                          |
|             | for a URI-     | World')                          |                          |
|             | encoded        | ,                                |                          |
|             | string.        |                                  |                          |
| xml         | Return the     | @xml(' <hello>world</hello> ')   | XML representation of    |
|             | XML version    |                                  | " <hello>world</hello> " |
|             | for a string.  |                                  |                          |
| xpath       | Check XML      | @xpath(' <hello>world</hello> ', | "world"                  |
|             | for nodes or   | '/hello')                        |                          |
|             | values that    | ,,                               |                          |
|             | match an       |                                  |                          |
|             | XPath (XML     |                                  |                          |
|             | AT GUT (AIVIL  |                                  | 1                        |



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|      | Path Language) expression, and return the matching nodes or values. |                |                                     |
|------|---|----------------|-------------------------------------|
|      |   | Math Functions |                                     |
| add  | Return the result from adding two numbers.                          | @add(3, 5)     | 8                                   |
| div  | Return the result from dividing two numbers.                        | @div(10, 2)    | 5                                   |
| max  | Return the highest value from a set of numbers or an array.         | @max(3, 5)     | 5                                   |
| min  | Return the lowest value from a set of numbers or an array.          | @min(3, 5)     | 3                                   |
| mod  | Return the remainder from dividing two numbers.                     | @mod(10, 3)    | 1                                   |
| mul  | Return the product from multiplying two numbers.                    | @mul(3, 5)     | 15                                  |
| rand | Return a random integer from a specified range.                     | @rand(1, 10)   | A random number<br>between 1 and 10 |



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## **Azure Data Factory Function Cheat Sheet**

| range      | Return an integer array that starts from a specified integer.               | @range(1, 5) | [1, 2, 3, 4, 5] |
|------------|---|--------------|-----------------|
| <u>sub</u> | Return the result from subtracting the second number from the first number. | @sub(5, 3)   | 2               |