PostgreSQL Data Types Cheatsheet with Examples

Here's a comprehensive table of PostgreSQL data types with examples:

Category	Data Type	Description	Example Value
Boolean	`boolean`	True or false	`TRUE`, `FALSE`, `NULL`
Character	`char(n)`	Fixed-length string, blank-padded	`'abc '` (for char(5))
	`varchar(n)`	Variable-length string with limit	`'hello'` (for varchar(255))
	`text`	Variable-length string, unlimited	`'This is a long text...'`
Numeric	`smallint`	2-byte integer (-32768 to +32767)	`12345`
	`integer`	4-byte integer (-2B to +2B)	`123456789`
	`bigint`	8-byte integer (-9Q to +9Q)	`123456789012345`
	`decimal(p,s)`	Exact numeric, user-specified precision	`1234.56` (decimal(6,2))
	`numeric(p,s)`	Same as decimal	`1234.56` (numeric(6,2))
	`real`	4-byte floating point	`123.456`
	`double precision`	8-byte floating point	`123.456789012345`
	`serial`	Auto-incrementing integer	`1`, `2`, `3` (automatic)
	`bigserial`	Auto-incrementing bigint	`123456789012345` (automatic)
Temporal	`date`	Calendar date (year, month, day)	`'2023-05-15'`
	`time`	Time of day (no time zone)	`'15:30:00'`
	`time with time zone`	Time of day with time zone	`'15:30:00+05:30'`
	`timestamp`	Date and time (no time zone)	`'2023-05-15 15:30:00'`

Category	Data Type	Description	Example Value
	`timestamp with time zone`	Date and time with time zone	`'2023-05-15 15:30:00+05:30'`
	`interval`	Time interval	`'1 day 2 hours 30 minutes'`
UUID	`uuid`	Universally Unique Identifier	`'a0eebc99-9c0b-4ef8-bb6d-6bb9bd380a11'`
Array	`integer[]`	Array of integers	`'{1,2,3}'`
	`text[]`	Array of text	`'{"apple","banana","cherry"}'`
	`varchar(10)[]`	Array of varchar(10)	`'{"abc","def","ghi"}'`
JSON	`json`	JSON data (stored as text)	`'{"name": "John", "age": 30}'`
	`jsonb`	Binary JSON data (indexable)	`'{"name": "John", "age": 30}'`
hstore	`hstore`	Key-value pairs	`'"key1"=>"value1", "key2"=>"value2"'`
Special	`inet`	IPv4 or IPv6 address	`'192.168.1.1'`
	`cidr`	IPv4 or IPv6 network address	`'192.168.1.0/24'`
	`macaddr`	MAC address	`'08:00:2b:01:02:03'`
	`point`	Geometric point	`'(5,10)'`
	`line`	Infinite line	`'{1,2,3}'` (coefficients)
	`lseg`	Line segment	`'[(1,2),(3,4)]'`
	`box`	Rectangular box	`'(1,2),(3,4)'`
	`path`	Open or closed path	`'[(1,2),(3,4),(5,6)]'` (open)
	`polygon`	Polygon	`'((1,2),(3,4),(5,6))'`
	`circle`	Circle	`'<(1,2),3>'` (center and radius)

Notes:

1. For character types, `varchar` without length specifier is equivalent to `text`.
2. `jsonb` is generally preferred over `json` as it's more efficient for querying.
3. The `hstore` extension must be enabled with `CREATE EXTENSION hstore;` before use.
4. Geometric types follow the syntax shown in the examples.
5. Array dimensions can be multi-dimensional (e.g., `integer[][]`).