

The JSON column everyone tiptoes around.

D8A.ACADEMY/RESOURCES/JSON-IN-SQL

READ A KEY

<code>data->'user'</code>	json out
<code>data->>'name'</code>	TEXT out
<code>data#>>'{a,b}'</code>	deep path, text

FILTER ON IT

<code>WHERE d->>'k'='x'</code>	match a value
<code>d @> '{"pro":true}'</code>	contains
<code>d ? 'key'</code>	key exists

ARRAYS

<code>jsonb_array_elements</code>	array → rows
<code>d->'tags'->0</code>	first element
<code>jsonb_array_length</code>	count items

CAST & COMPUTE

<code>(d->>'amt')::NUMERIC</code>	then SUM works
<code>(d->>'ts')::DATE</code>	then date math
<code>jsonb_typeof(d)</code>	debug a column

SPEED & BUILD

GIN index on jsonb	fast @> filters
<code>jsonb_build_object</code>	json back out
hot keys → columns	promote them

GOTCHAS

<code>SUM(d->>'amt')</code>	← text. cast it first.
missing key	NULL, not an error
json vs jsonb	use jsonb. always

WORTH MEMORIZING

01 Events table to clean rows

The pattern that turns an API dump into something a dashboard can read.

```
SELECT
  e.data->>'user_id'           AS user_id,
  (e.data->>'amount')::NUMERIC AS amount,
  t.value->>0                  AS tag
FROM events e,
     jsonb_array_elements(e.data->'tags') t
WHERE e.data->>'type' = 'purchase';
```

→ `jsonb_array_elements` in FROM is an implicit lateral join: one output row per array item.

02 Trap: ->> always returns text

The query runs, the number is wrong. The worst kind of bug.

YOU WROTE	WHAT HAPPENS	WRITE INSTEAD
<code>SUM(d->>'amt')</code>	error, or text concat	<code>SUM((d->>'amt')::NUMERIC)</code>
<code>d->>'price' > 100</code>	'9' beats '100' as text	<code>::NUMERIC</code> before comparing
<code>d->'name' = 'Ana'</code>	json vs text: never equal	<code>d->>'name' = 'Ana'</code>

→ One arrow returns json, two arrows return text, and text sorts alphabetically. Cast at the boundary.