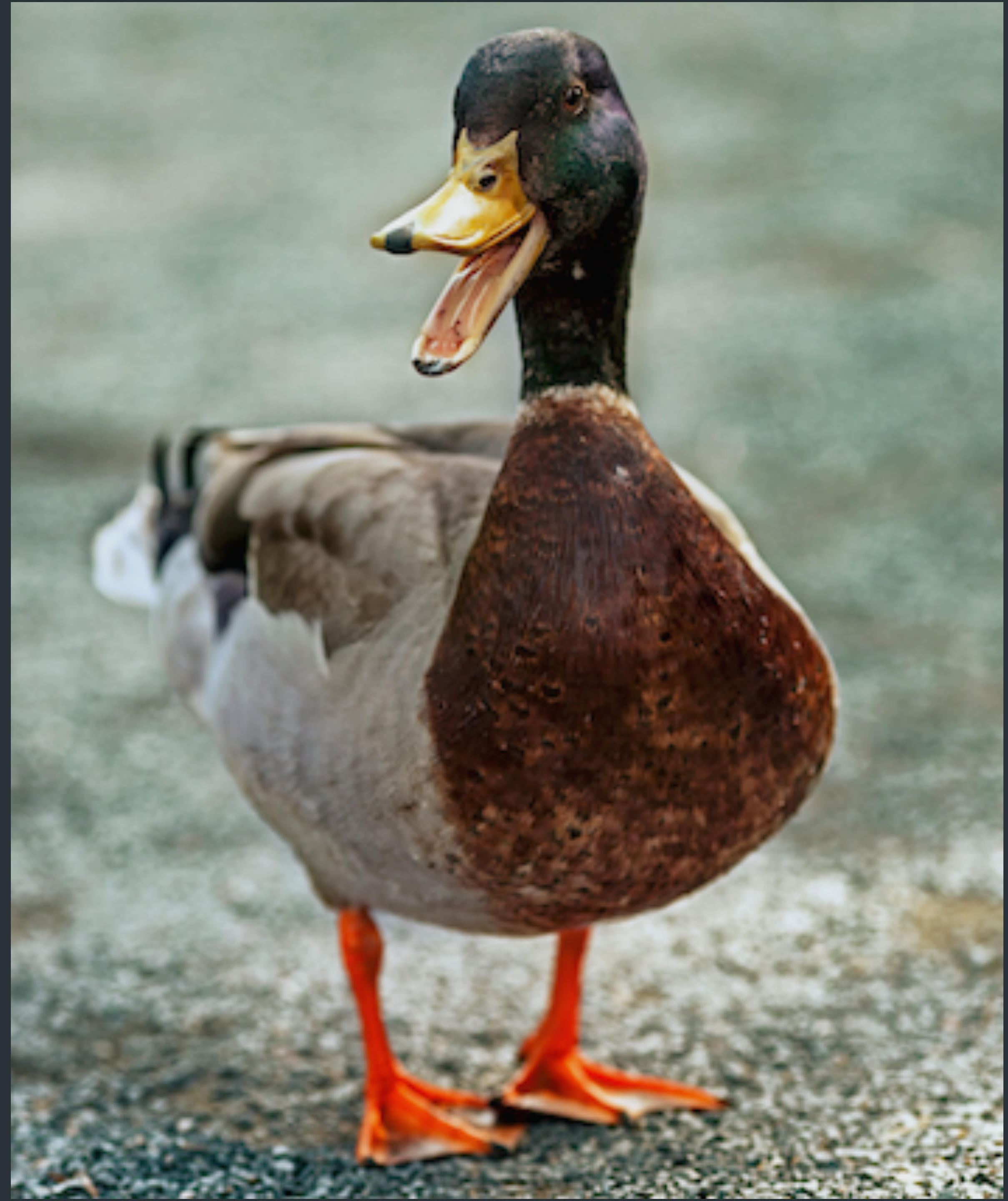


kokchun giang

navigating around
in **duckdb** in
command line
tool and vscode



the interactive **command line interface** of duckdb

```
duckdb_sql_course% duckdb salaries.duckdb  
v0.10.3 70fd6a8a24  
Enter ".help" for usage hints.
```

```
D desc;
```

database varchar	schema varchar	name varchar	column_names varchar[]	column_types varchar[]	temporary boolean
0 rows					

```
D █
```

command to launch a duckdb
session and open a persistent
database called salaries.duckdb

output of the command

interactive CLI accepts SQL
commands and duckdb specific
commands

this **sql script** ingests data from a csv file
into duckdb database

creates a table and
stores data read
from csv file

▼ DUCKDB_SQL_COURSE

data

salaries.csv

ingest_salaries.sql

salaries.duckdb

ingest_salaries.sql

Run on active connection | Select block

```
1 CREATE TABLE
2   IF NOT EXISTS job_salaries AS (
3     SELECT
4       *
5     FROM
6       read_csv_auto ('data/salaries.csv')
7   );
8
```

path to csv file

two different ways of running **sql script** in duckdb CLI

input redirection, takes content from
ingest_salaries.sql as input

```
duckdb_sql_course% duckdb salaries.duckdb < ingest_salaries.sql
duckdb_sql_course% duckdb salaries.duckdb
v0.10.3 70fd6a8a24
Enter ".help" for usage hints.
D SELECT * FROM job_salaries;
```

work_year int64	experience_level varchar	employment_type varchar	job_title varchar
2024	SE	FT	AI Engineer
2024	SE	FT	AI Engineer
2024	SE	FT	Data Engineer
2024	SE	FT	Data Engineer
2024	SE	FT	Machine Learning Engineer
2024	SE	FT	Machine Learning Engineer
2024	MI	FT	ML Engineer
2024	MI	FT	ML Engineer
2024	EN	FT	Data Analyst
2024	EN	FT	Data Analyst
2024	SE	FT	Data Engineer
2024	SE	FT	Data Engineer
2024	EX	FT	NLP Engineer
2024	EX	FT	NLP Engineer
2024	MI	FT	Data Scientist

.read is a dot-command which
requires an active session

```
duckdb_sql_course% duckdb salaries.duckdb
v0.10.3 70fd6a8a24
Enter ".help" for usage hints.
D .read ingest_salaries.sql
D SELECT * FROM job_salaries;
```

work_year int64	experience_level varchar	employment_type varchar	job_title varchar
2024	SE	FT	AI Engineer
2024	SE	FT	AI Engineer
2024	SE	FT	Data Engineer
2024	SE	FT	Data Engineer
2024	SE	FT	Machine Learning Engineer
2024	SE	FT	Machine Learning Engineer
2024	MI	FT	ML Engineer
2024	MI	FT	ML Engineer
2024	EN	FT	Data Analyst
2024	EN	FT	Data Analyst
2024	SE	FT	Data Engineer
2024	SE	FT	Data Engineer
2024	EX	FT	NLP Engineer
2024	EX	FT	NLP Engineer
2024	MI	FT	Data Scientist

the write-ahead log **.wal** file maintains data integrity and recoverability



data

- salaries.csv
- ingest_salaries.sql
- salaries.duckdb
- salaries.duckdb.wal

temporary file that writes changes to this log before applying to the database file

.wal file created when the database changes like in INSERT, UPDATE or DELETE operations

ensures ACID compliance to get data integrity

duckdb can use .wal file to restore database in case of crash

disappears after clean shutdown of duckdb session e.g. when you do ctrl+c or cmd+d