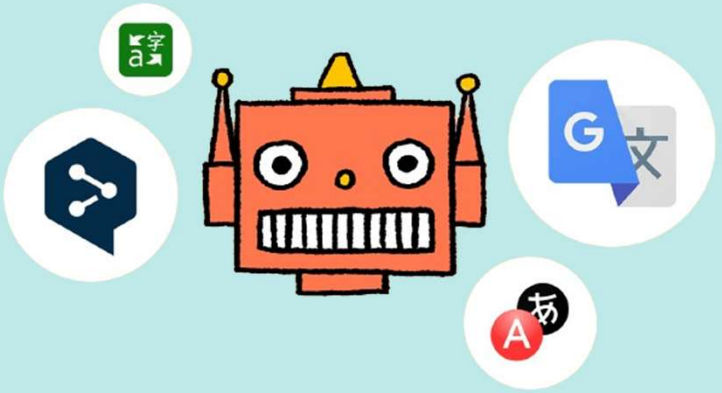


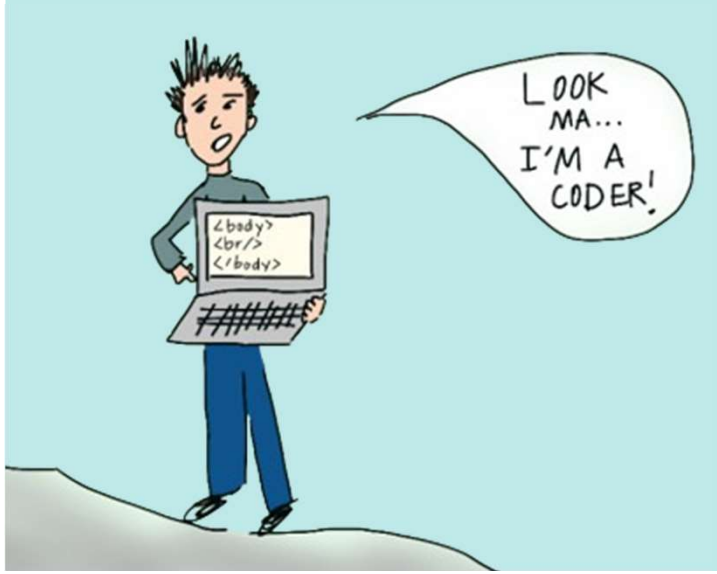
Query-fi

A Transfer Learning Approach to Semantic Parsing SQL Queries

Naman Singhal
Sudarshan Paranjape
Nisharg Gosai
Shreyashri Athani

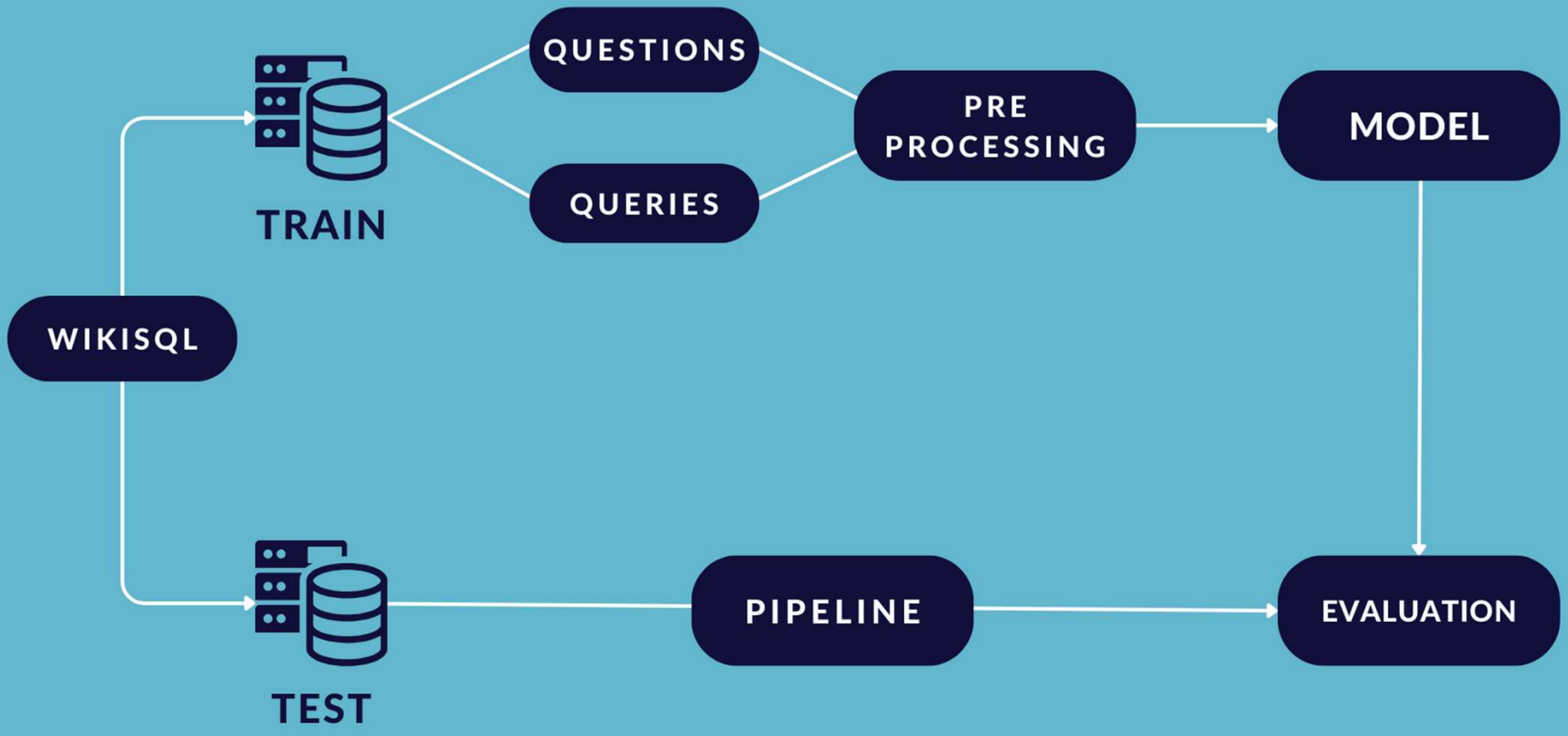
Why?

Because Typing SQL is So Last Century !



- Eliminates knowledge Transfer time for large Schemas.
- Makes Databases more accessible.

Methodology



Building the Brain

(Weakly supervised without logical Forms)

NMT

Neural network model used in machine translation

Attention based Gated Recurrent Unit (GRU)

BART

Bidirectional & Auto-Regressive Transformers (BART)
model by Facebook

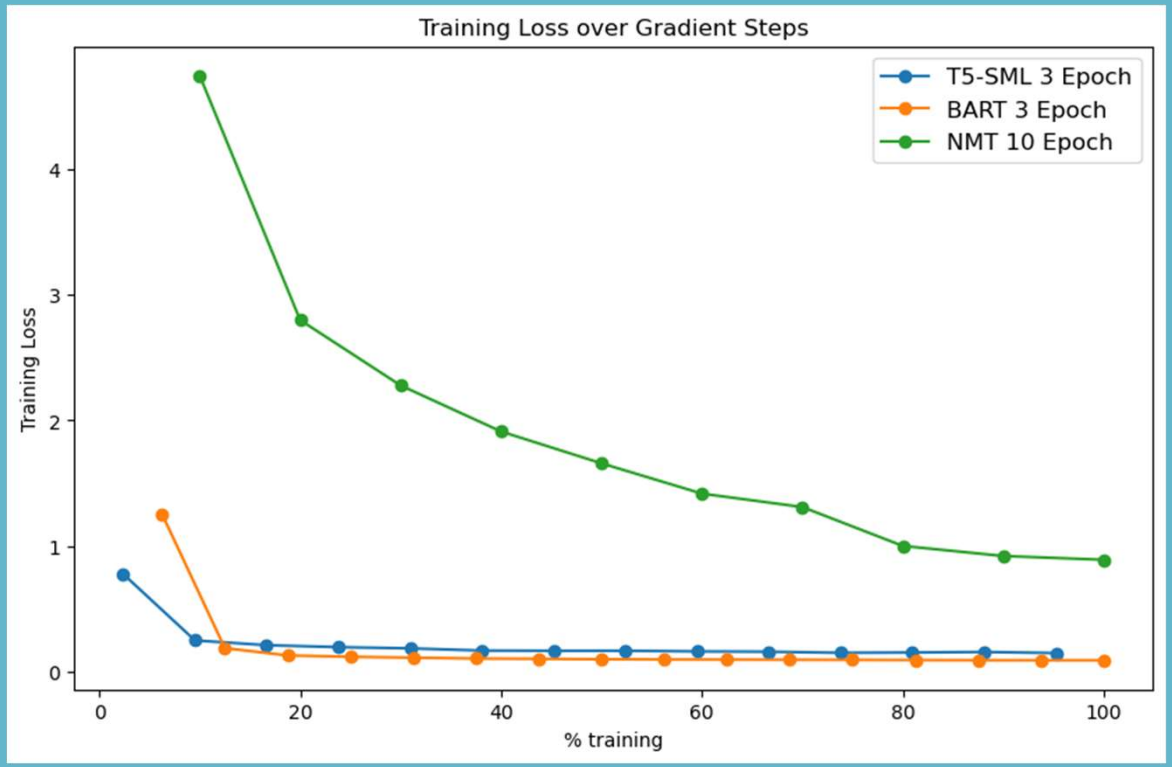
Utilizes both masked language modeling and denoising autoencoding objectives

T5

Transformer based model by Google

Pretrained on translation of around 50 languages

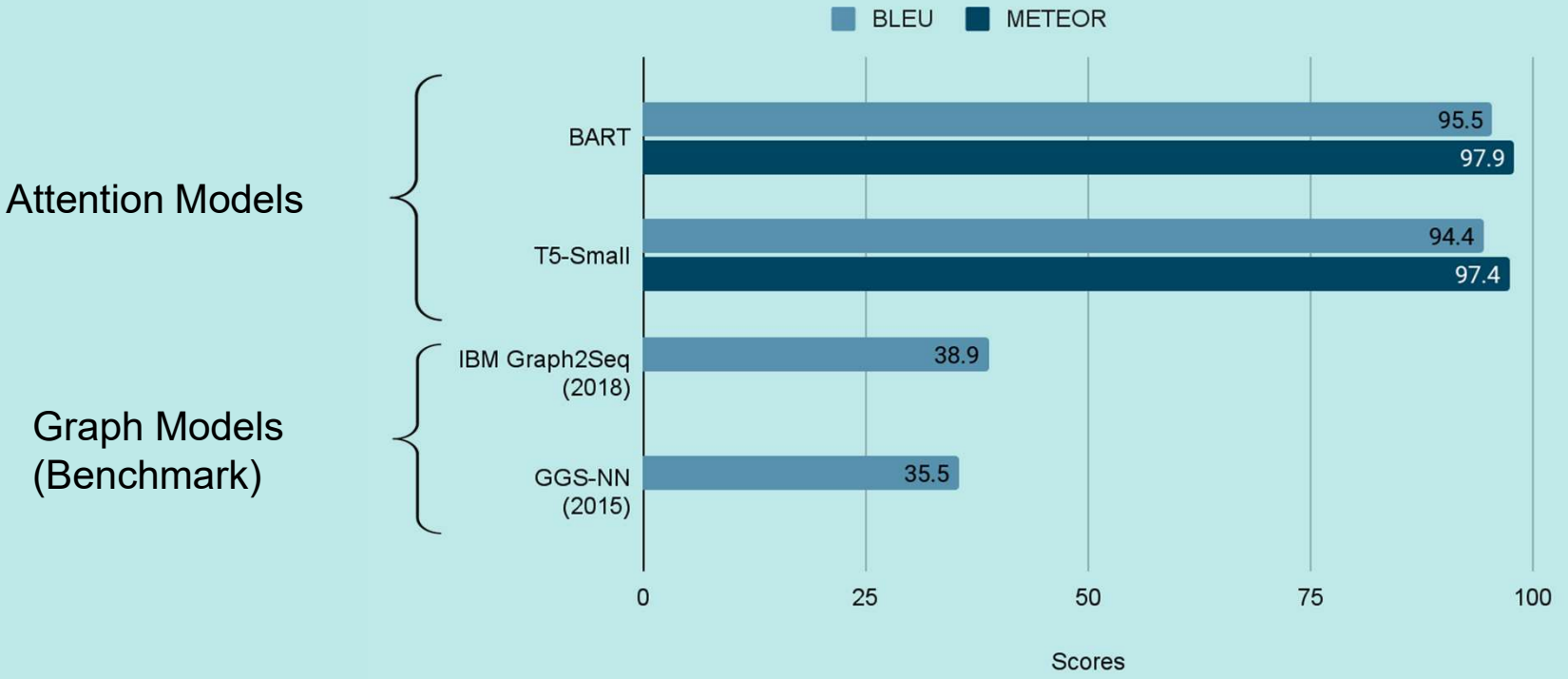
Testing The Model

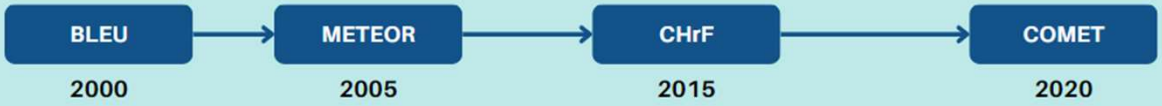



```
QUERY - [SOS] What clu was in toronto 1995-96
Expected = SELECT School/Club Team FROM table WHERE Years in Toronto = 1995-96

NMT model - select club from table where club from table where club from table where club from table
T5 Model - SELECT clu FROM table WHERE Location = toronto 1995-96
BART model - SELECT Clu FROM table WHERE Year = 1995-96 AND City = Toronto
```

METRICS





WikiSQL Benchmark (SQL-to-Text) | Papers With Code

Future Scope

- Boosting model accuracy and robustness via guided decoding or integrating an SQL-syntax model for query generation.
- Support for advanced query generation.
- Adaptation to Domain Specific Databases.
- Integration with BI tools
- Real time and Streaming support

Questions ?