



# Wikidata Powered Language Keyboards

Andrew McAllister  
Will Yoshida  
Henrik Thomasson  
Maintainers of Scribe

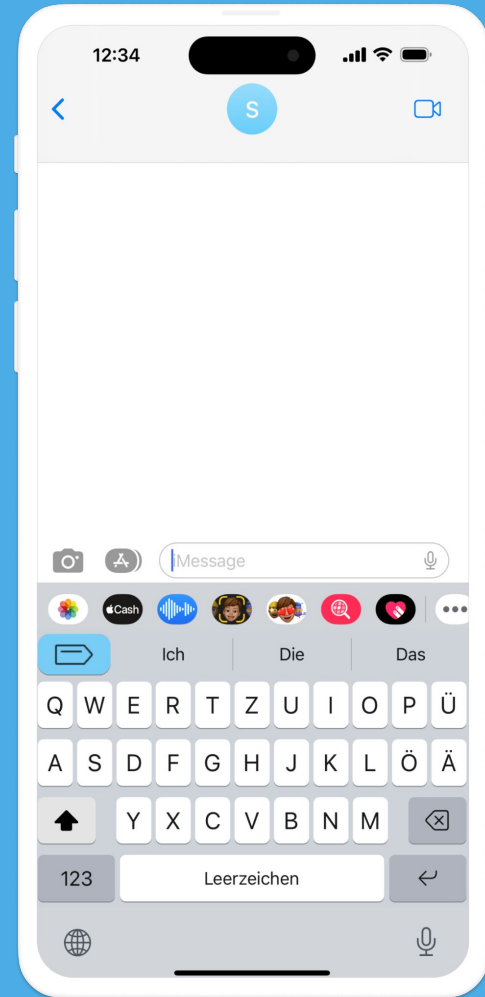


**WIKIMEDIA TECH  
SAFARI PROGRAM**

# Schedule

- Presentation (~30 min)
  - Short Introduction
  - iOS Demo
  - Scribe Structure
  - Wikidata + Data Process
  - Future Plans
- Discussion (rest of session)

\* Questions always welcome!



# Overview

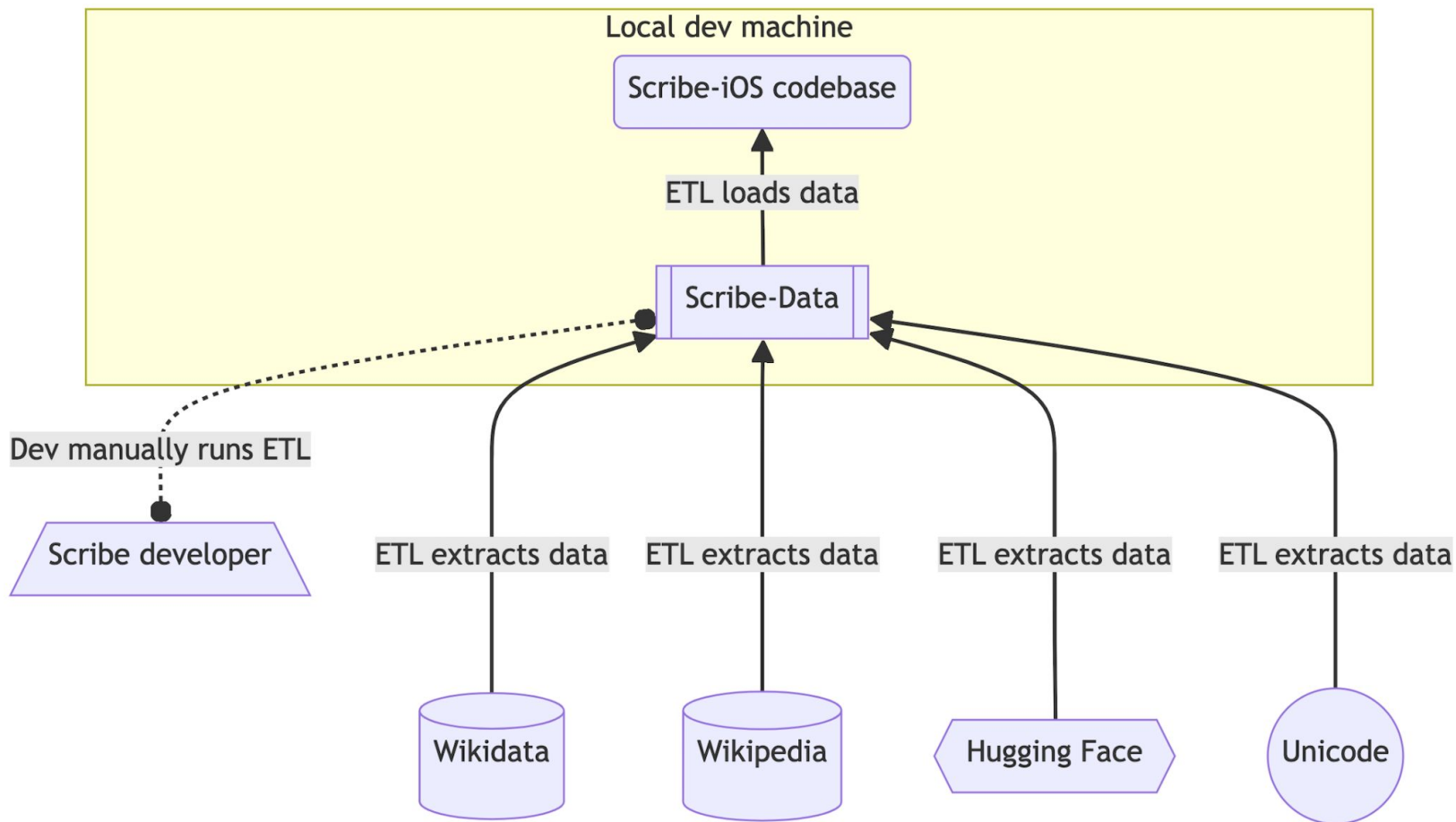
- Keyboards for second language learners
- “Never leave your keyboard”
- Open source + open data + open community
- iOS (Server API WIP, Desktop GUI WIP, Android WIP)
- French, German, Italian, Portuguese, Russian, Spanish, Swedish
- [Wikimedia featured project](#) for new developers

# iOS Demo

Scribe's German Keyboard

# Scribe Structure

How our software fits together



# Wikidata + Data Process

Lexemes and how we use them

# Wikidata

- A collaboratively edited knowledge graph (CC0)
  - From Wikimedia (DE)
  - Unique identifiers (QIDs)
  - Scribe uses [language data](#)
  - [Wikidata Query Service](#)
  - Python APIs





# Data Process (Verb Conjugations)

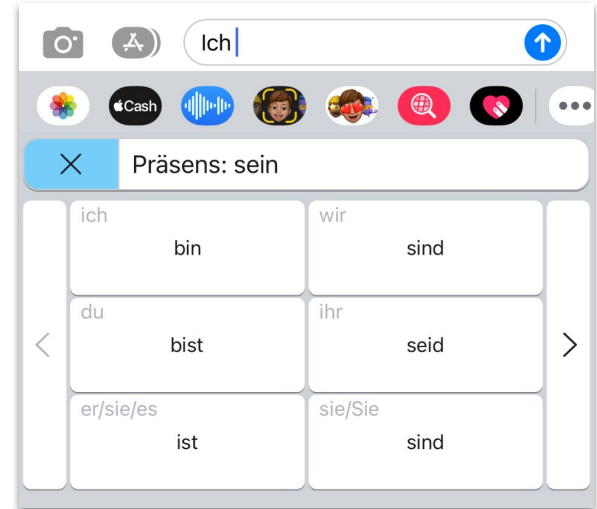


ScribeData



- sein (L1761)
- bin (Form 5)
  - Q21714344
  - Q110786
  - Q192613
  - Q682111

```
"sein": {  
  "presFPS": "bin",  
  "presSPS": "bist",  
  "presTPS": "ist",  
  ...  
} ...
```



# Data Process

- Data in app (no internet)
- **WDQS** queries for each word type of each language
- JSON outputs saved
- Data formatting
  - SQLite outputs to apps
- Takes ~10min

```
Scribe-Data/src/scribe_data/  
└─ load/  
    | update_data.py  
    |  
└─ extract_transform/  
    └─ German/  
        └─ nouns/  
            | query_nouns.sparql  
            | nouns_queried.json  
            | format_nouns.py -> Scribe-iOS, etc.  
        └─ prepositions  
        └─ translations  
        └─ verbs  
  
    └─ other_languages...
```

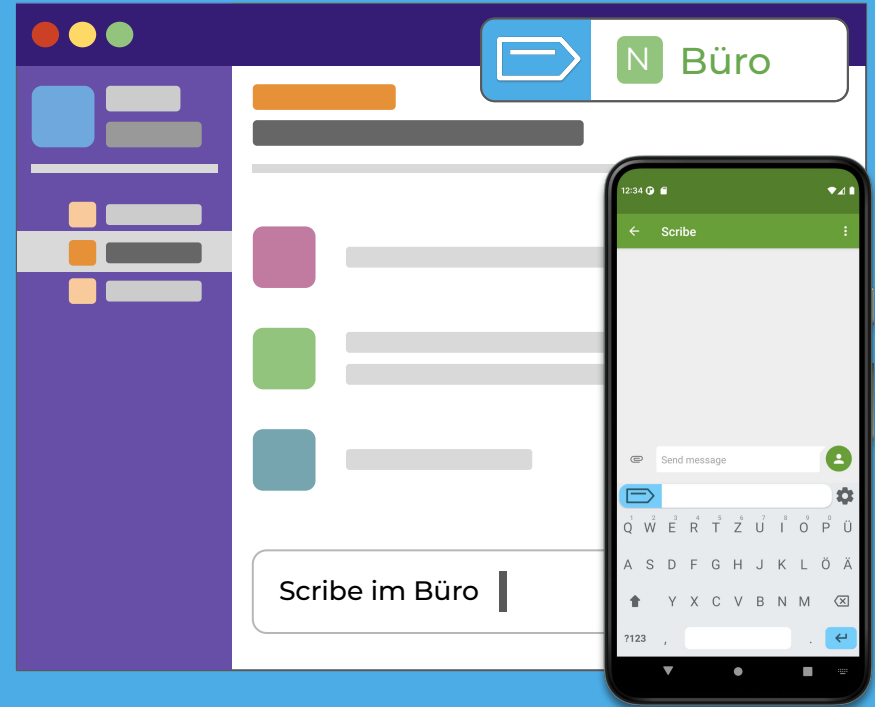
```
scribe_data/load [main] » python update_data.py
```

```
Data updated: 0%| | 0/16
```

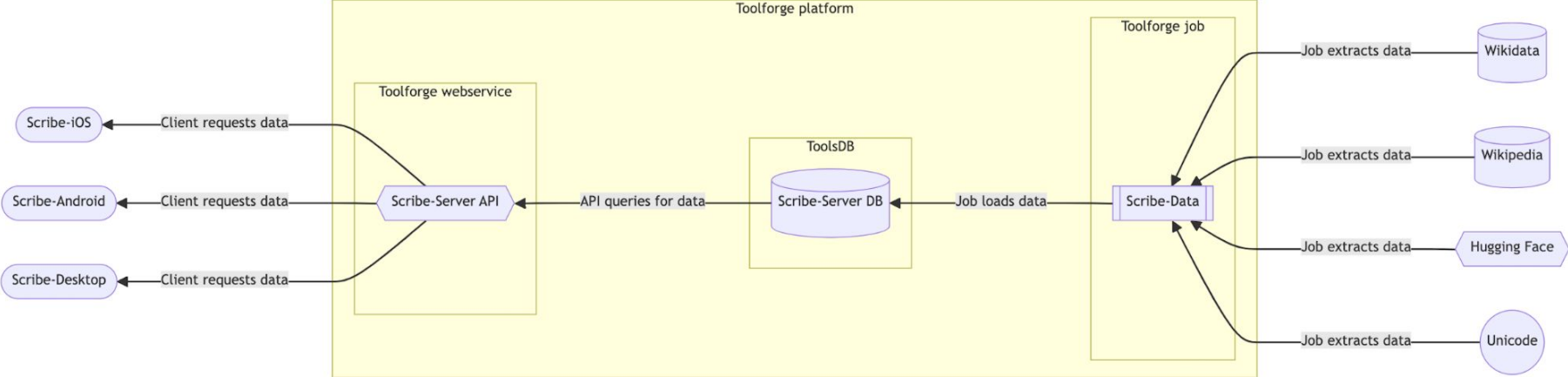
```
Querying German nouns
```

# Future Plans

- [Scribe-iSO v3.0](#) in Swift
- [Scribe-Server](#) API in Golang
- [Website](#) in Vue.js
- [Scribe-Android](#) in Kotlin
- [Scribe-Desktop](#) GUI in Rust
- More languages
  - English, Norwegian and more!
  - See [Scribe-Data files](#)
- Join our [Matrix/dev syncs](#)!



# Future Structure



# Thank you for your interest in open-source!

To stay in touch or contribute:

<https://github.com/scribe-org>

[https://matrix.to/#/#scribe\\_community:matrix.org](https://matrix.to/#/#scribe_community:matrix.org)

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