LexMapr2, a LexMapr update to retrieve current ontology information

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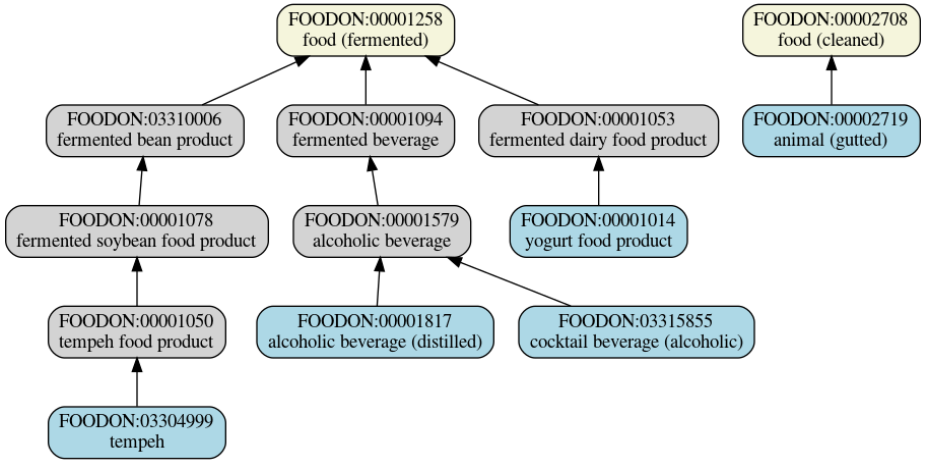
Introduction/Hypothesis

- Issues with free-text metadata:
  - — missing data
  - — misspellings
  - — lack context
  - — lack specificity
  - — many unique values
  - — many overlapping values
- Ontology accession are:
  - — standardized
  - — interoperable
  - — unique
  - — persistent
  - — searchable
  - — machine-readable
- LexMapr translates free-text descriptions into ontology accessions
  - – https://github.com/cidgoh/LexMapr
  - – “dried mango” → FOODON:03316377
  - – requires continuous maintenance to keep up with changes to ontology frameworks.

Findings/Results

- Three primary changes:
  - Retrieve current ontology accessions
  - Group results by parent ontologies
  - Visualize results
- Built SQL databases within 30 minutes
- Mapped 6,825 queries in 3 hours
- Utilized 3 Gb of resource files

Example output of LexMapr2



Conclusion

- Current information can be used
- Missing data in the source files will lead to missing data in the databases
- LexMapr2 is considerably slower than the original version

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Thank you!

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