

Perplexity Site Update

Olomouc 2024

Perplexity

Goal: Enable developers to build predictable natural language interfaces using DELPH-IN and Python

Rewritten from Prolog to Python over the last 1.5 years

Open Source at: <https://github.com/EricZinda/Perplexity>

History

- 2020 - 2023: Incubating engine for exploring a microworld with ERG
 - Explored DELPH-IN and ERG
 - Built Private Perplexity 1 on Prolog
 - Prototyped approaches to using it for natural language interfaces
 - Built 5 games ... that didn't really show off Perplexities uniqueness
- 2023: Begin building open-source Perplexity 2 on Python
 - <https://github.com/EricZinda/Perplexity>
 - More rigorous solver
 - Much more approachable developer interface than Perplexity 1
 - Intern Will Min began "The English Restaurant" as a more conversational game

2024 Update

- Focused on supporting Pragmatics and “general vs. particular” statements

	Literal Behavior	Pragmatic Interpretation
"Do you have a menu?"	"Yes"	"Give me (maybe us) a menu"
"What do you have?"	[Exhaustively list everything I have: "a wallet", "socks", etc.]	"Give me a menu"
"I'll have a menu"	"Will you? Let me know when."	"Give me a menu"
"Do you have vegetarian dishes?"	"Yes"	"Describe the list of vegetarian dishes"
"Do I have the vegetarian soup?"	"Yes"	"Yes"

- Using “The English Restaurant” game as the test bed
 - Much more dialog-based game, better demo of Perplexity
 - Testing in a competition:
 - <https://itch.io/jam/parsercomp-2024/entries>
 - <https://ericzinda.itch.io/the-english-restaurant>
 - Working with Luis to potentially incorporate as a robot mini-game