

Social Intelligence Data Infrastructure: Structuring the Present and Navigating the Future



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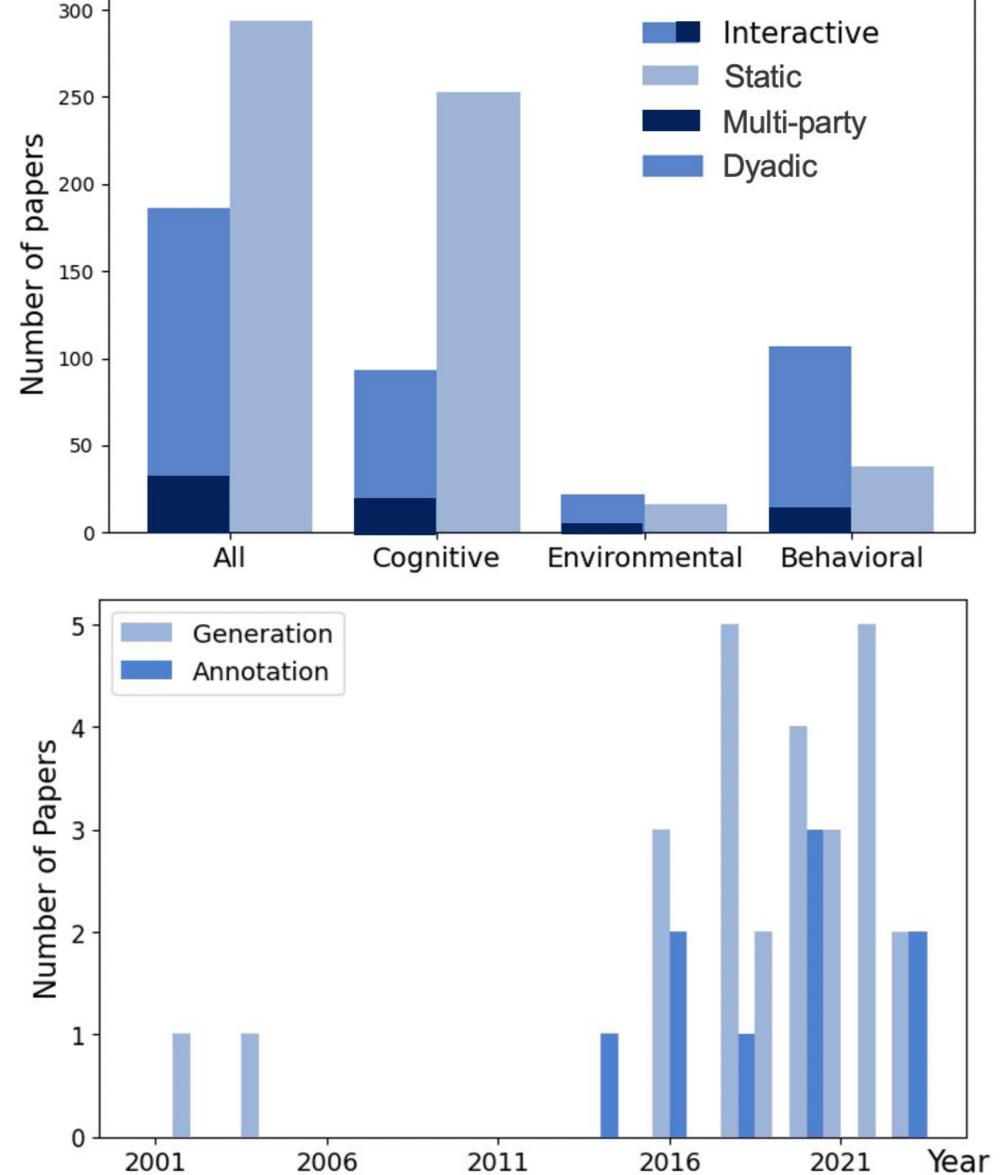
Paper

Introduce consistency to non-standard definitions of Social Intelligence in Al Systems

Organize diverse datasets focusing on <u>isolated</u> dimensions

Social Al Taxonomy **Social Intelligence Cognitive Intelligence** Situational Intelligence **Behavioral Intelligence** Ability to understand others' Ability to understand Ability to behave and interact. intents, beliefs and emotions. the social environment. **Reciprocal interactions Environment** Situational **Environment Factors: Factors Cognitive Factors: Communication Focuses:** Intelligence Social Norm Intent Information Sharing Cultural Norm Cognitive Belief Social Influence Cognitive Speaker Information Intelligence Emotion **Factors** Open-Domain Social Event Moral Value **Examples of NLP Tasks: Examples of NLP Tasks:** Behavioral Hotel Booking Theory of Mind Test **Examples of NLP Tasks:** Intelligence Stance Detection Computational Persuasion Social Norm Formalism System / Chitchat Social Relation Understanding Depression Detection Social Intelligence Collaborative Dialogue People Social Commonsense Reasoning Of AI Systems

Current Social NLP Data Landscape Cognitive (347) Situational (38) C 60 Behavioral (145) Fewer datasets on situational intelligence (moral values and social norms) and multiple intelligence types.



Interactivity

More **static** datasets than **interactive** ones.

Fewer datasets on **multi-party** modeling.

Use of Al

Increasing usage of Al in dataset curation.

Higher degree of Al adoption in generation than annotation.

LLM Probing

	Claude-v2	GPT-4	Llama2-13B
NormBank	52.5	60.8	40.0
MoralExceptQA	47.3	50.0	33.1

LLMs find **long-tailed social situations** (e.g. moral exceptions) more challenging.

	Claude-v2	GPT-4	Llama2-13B
Positive Reframing	83.5	96.2	92.0
CounselChat	62.6	93.5	84.6

% preferred to texts written by human

LLMs perform better on static writing tasks (single-turn) than on **interactive tasks** (multi-turn).

Recommendations for Future Datasets -



Data Content

- Specific, nuanced, and long-tailed social situations.
- **Better coverage** on language, culture, countries, user groups and domains.

Data Structure

- Higher interactivity in data and evaluation.
- Undergo dynamic evolution to capture social changes.

Data Collection

- Interdisciplinary, expert annotation.
- Active paradigm of dataset construction
- Human-in-the-loop collaborative workflow