

Theme : Conversational Assistant

- Sub Theme : Character Mining based on Multi-part Dialogue

The Character Mining project aims for machine comprehension on multiparty dialogue. The objective of this project is to develop a machine that interprets explicit and implicit contexts in dialogue. This project has produced corpora and machine learning models for three tasks: entity linking that auto-recognizes the identification of each personal mention (e.g., she → Judy), reading comprehension that challenges machine's ability to understand human conversations through standardized tests, and emotion detection that analyzes the emotion of each speaker.

We are expecting to develop multi-party dialog system based on character-emotion recognition system using individual information and its analyzed information.

- Character Identification : A novel coreference resolution algorithm that selectively creates clusters to handle both singular and plural mentions, and also a deep learning-based entity linking model that jointly handles both types of mentions through multi-task learning.

- Reading Comprehension : A robust deep learning architecture for a task in reading comprehension, passage completion, on multiparty dialog.

- Emotion Detection : Emotion detection on multiparty dialogue as well as deep neural models that outperform the existing approaches for document classification.

※ The topics are not limited to the above examples and the participants are encouraged to propose original idea.

※ Funding : Up to USD \$150,000 per year