Special Session on "Deep Learning on Semantic Web for Knowledge Discovery"

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Deep learning on the semantic web refers to the application of deep learning techniques to discover knowledge from the semantic web. It incorporates the use of ontologies, which are formal representations of knowledge domains, to enhance the understanding and interpretation of web data. When applied to the semantic web, deep learning techniques can help uncover hidden patterns, relationships, and insights from the vast amount of interconnected data. Deep learning models can be trained to identify and link entities mentioned in web documents to their corresponding semantic web resources. This can help in disambiguating entity references and enriching the knowledge graph. Deep learning techniques can aid in automatically constructing ontologies from unstructured or partially structured data. By analyzing textual descriptions and relations between entities, these models can learn the underlying structure and hierarchy of a knowledge domain, facilitating knowledge discovery. Deep learning algorithms can influence recommendation systems on the semantic web by learning user preferences, item characteristics, and the relationships between them. This can enable personalized recommendations of relevant resources, fostering knowledge discovery based on user interests. Overall, the integration of deep learning with the semantic web holds promises for advancing knowledge discovery by leveraging the impact of neural networks to extract meaningful insights from interconnected data sources.

Scope of this session shall include but are not limited to the following:

- Knowledge graph in Deep learning
- Semantic web technology and Linked Open Data
- Deep learning and Linked Open data for enhancing knowledge discovery
- Semantic search and recommendation system
- Structured knowledge, Deep Learning and Explainable AI(XAI)
- Deep learning models and Relation Extraction in text mining
- Semantic web technology-based reasoning and inferences
- Linked Open Data and deep learning in data analysis and knowledge representation
- Deep learning models and Knowledge graph completion
- Entity Linking or entity disambiguation with deep learning models
- Learning knowledge representation using deep learning models on text
- Semantic Textual Similarity
- Ontology-based knowledge inference and reasoning
- Ontology-based deep learning
- Ontology-based deep learning in Image and Video Analysis, Bioinformatics and Healthcare, IoT, Social Media Analysis, Cybersecurity, Financial Analysis, Automation systems.