World Wide Web Special Issue on
Advancing Recommendation Systems with Foundation Model

Foundation models are pretrained based on massive amounts of data and serve as the base for various downstream tasks. The most representative one is the Large Language Model ChatGPT, that has completely transformed the landscape of natural language processing (NLP), delivering remarkable performance for text classification/summarization, named entity recognition, translation, sentiment analysis, and so on. Pretrained computer vision (CV) models such as VGG-16 and ResNet50 based on ImageNet have also been used as foundation models for various vision tasks including object detection, image classification, or semantic segmentation.

Recommendation systems play a vital role in various domains, including e-commerce, content streaming platforms, social media, and personalized advertising. These systems employ sophisticated algorithms and multimodal data to analyze user preferences and provide tailored recommendations. Inspired by the success of the foundation models in CV and NLP, we believe foundation models can also benefit recommendation systems in many ways. For example, foundation models can effectively integrate and leverage multiple sources of information such as text, images, geo-locations, and social interactions, to learn rich representations of user preferences and item characteristics; By leveraging the knowledge gained during pre-training on vast amounts of data, foundation models can effectively address the challenges associated with long-tail item distributions and cold-start scenarios.

This special issue aims to explore the novel applications, methodologies, and advancements in utilizing foundation models for recommendation systems. Topics of interest include, but are not limited to:

- Application of foundation models in recommendation systems
- Foundation models for domain-specific recommendation systems
- Foundation models for neural recommendation/ranking/prediction
- Integrating foundation models with traditional recommendation algorithms
- Pre-training techniques for foundation models in recommendation
- Fine-tuning techniques for foundation models in recommendation
- Prompt engineering techniques for foundation models in recommendation
- Multimodal data analysis for recommendation with foundation models
- Large-scale data processing for modern recommendation systems
- Transfer learning for recommendation with foundation models
- Explainability of recommendation systems leveraging foundation models
- Benchmarking foundation models for recommendation

Important Dates
Paper submission deadline: December 31, 2023
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