

An Overview of Natural Language Processing (NLP) Applications in Construction Contract Management

The current practice of construction contract management, which is a manually driven activity, is prone to errors and delays, as evidenced by the sheer size of disputes in the sector. With the advancement in AI, many tasks that are otherwise time-consuming, repetitive, error-prone or intensive can be automated, pointing to the direct application of AI to solve some of the contract management problems faced by the construction sector. Among the various applications of AI, tools that aid human decision-making are one type in which AI models provide reliable information quickly, enabling faster, more informed decisions. Natural Language Processing (NLP) is one such branch of AI that involves language- or speech-based tasks, such as analysing textual information and generating text based on specific instructions, as well as translation-related tasks. Specifically, in construction contract management, NLP has numerous applications, ranging from simple document analysis to developing chatbots that assist humans in making complex decisions. This talk will provide an overview of various research projects at the Contract Management Lab at the BTCM Division of IIT Madras, ultimately aimed at automating contract analysis and administration tasks.



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Murali Jagannathan is an Assistant Professor at the Building Technology and Construction Management (BTCM) Division, Department of Civil Engineering, IIT Madras, specialization in construction contracts and claims management and construction dispute resolution. Before joining IIT Madras in June 2023, he was a faculty member at L&T Institute of Project Management, Chennai, where he trained and developed corporate professionals at India's largest construction firm, Larsen and Toubro Limited. Earlier to L&T IPM, he was an assistant professor of construction management at the National Institute of Construction Management and Research (NICMAR), Pune. In his role as a faculty member at NICMAR, he was involved in regular student teaching, Management Development Programmes (MDPs) and academic administration. Apart from the academic experience, Murali also brings in industry experience. He has worked with the business development team at L&T Construction and has been involved in project planning and coordination across India. Murali has authored many articles on contract management, contractual disputes, and dispute resolution, which have been published in renowned national and international journals and presented at conferences worldwide.

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