Manufacturing Justice: The Value of Looking at the Legal System through Operations Management Eyes

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The Israeli court system is characterized by increasing demand and long lead time (LT) of legal cases. This high workload has consequences for the economy, access to justice and quality of justice. This paper describes a cooperation with the Jerusalem District Court, aimed to reduce the average case life cycle, without additional budgets or resources. To achieve this goal, we draw parallel between the legal case handling process and service processes in other industries, and key operations management principles were adapted and implemented in this unique environment. As a result, there have been several operational changes to the case handling process, including, amongst others, changes in the scheduling mechanism of cases. Data were collected on the system's performance before and after the implementation. An econometric analysis of this data shows a significant reduction of 46% in LT for the treated part of the case.

Natural Language Processing: Developing Models for the Hebrew Language

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In recent years, Natural Language Processing (NLP) models have been at their peak for various languages and learning tasks, such as automatic translation, question answering, sentiment analysis, and text summarization. NLP for Hebrew, on the other hand, remains still underdeveloped. This is not entirely surprising; the target audience of Hebrew is significantly smaller than that of other languages, and the structure of the language is much more complex. Unlike Latin languages, Hebrew is considered a Morphologically Rich Language (MRL) – a language in which the morphological information is encoded as a part of a word rather than as separate words. In 2021, the authors of this paper developed the first BERT-based language model for the Hebrew language, which constituted an opening shot for many studies in the field. In this paper, we will present the challenges in developing the Hebrew language model and review the existing models and the ongoing efforts to develop new tools and models. We will further offer a short tutorial on how, without prior knowledge, one can use our Hebrew language model for the tasks of sentiment analysis and emotion recognition.