

Abstract

MIMIC-IV (Medical Information Mart for Intensive Care IV), is a medical dataset used for research in the fields of medicine and health computer science. This dataset contains health information collected from intensive care units (ICUs) at hospitals in the Beth Israel Deaconess Medical Center in Boston, MA. This research uses process mining to analyze data quality of patient treatment in the MIMIC-IV dataset using the Alpha Miner, Heuristic Miner, and Inductive Miner algorithms. It begins with planning and justification, followed by database reconstruction, data quality assessment, and data extraction, leading to the development of a control flow model. Subsequently, conformance checking is performed, and the study concludes with an evaluation of the results. It is expected that the results of this study will provide a better understanding of the quality of patient care process data in the MIMIC-IV dataset and a positive contribution to developing more effective health services.

Keywords : Process Mining, Process Discovery, Conformance Checking, Inductive Miner, Healthcare, Alpha Miner, Heuristic Miner, Data Quality