

Bachelor Project 2023/2024 Business Process Technology



Event Log Extraction from Patient Experiences using Large Language Models.

Chronic disease management often involves complex and long-term care plans. The inherent variability and unstructured nature of patient experiences present significant challenges to extracting actionable insights. This information is often buried in large volumes of text data, such as patient-reported experiences, clinical notes, and other health records. In an increasingly digital healthcare ecosystem, capturing and understanding the patient journey is pivotal in delivering effective and personalized care. Process Mining is a promising technology for mapping patient journeys. However, effectively mining and interpreting this data can prove challenging.

The recent advent of Large Language Models, a generative AI technology, opens up a multitude of possibilities for extracting and understanding patient experiences in unprecedented ways. These sophisticated models, capable of understanding and generating human-like text, offer a new avenue for interpreting unstructured data, such as patients' personal narratives of their medical experiences.

mama health is a digital health startup founded by former HPI students on a mission to improve the life of chronic patients. By collecting the experiences of numerous patients, they use process mining techniques to visualize and analyze the patient journey. Through patient journeys they discover patterns, deviations, bottlenecks, and sequences that may otherwise go unnoticed. They have an office in Potsdam (building E @HPI), an office in Berlin (WeWork @Potsdamer Platz) and one in Milan (WeWork). Students are free to visit us and work from our offices!

In this project, we will explore the intersection of healthcare and cutting-edge artificial intelligence technology. The objective is to extract event logs from unstructured text data, a task traditionally requiring extensive manual labor and specialized knowledge. These event logs serve as the foundational element for the discovery and visualization of patient journeys through process mining.

Contacts

Business Process Technology Chair at HPI

- Prof. Dr. Mathias Weske (mathias.weske@hpi.de)
- Jonas Cremerius (jonas.cremerius@hpi.de)

mama health

- Dr. Adriatik Nikaj (adriatik.nikaj@mamahealth.io)
- Lorenzo Famiglini (lorenzo.famiglini@mamahealth.io)

