Abstract

The industrial paradigm of a Digital Twin (DT), a virtual representation of a physical object, promises an impactful opportunity to advance digital healthcare. Especially in telemedicine, the application of DTs could yield various benefits for patients, providers, and payers. However, the development of DTs for healthcare and specifically telemedicine is not yet mature. Therefore, this research in progress paper attempts to structure the research field and classify DTs for digital health and in future, for telemedicine. Based on a systematic literature review (SLR) and grounded theory analysis techniques, we derive 12 dimensions and 35 characteristics that support researchers and practitioners to develop, apply, refine and evaluate various DT applications. The taxonomy serves as a promising starting point for further research on implementing or adopting DTs in healthcare and telemedicine. An application of a real-world objective already shows the feasibility of our taxonomy.