Paper Title:

Digital Twin: Enabling Technologies, Challenges and Open Research.

Paper Link:
https://ieeexplore.ieee.org/document/9103025?denied=

1 Summary
1.1 Motivation

The primary motivation of this paper is to resolve the implications of Digital Twins, analyzing their possibilities as transformative forces. The hypothesis proposes that Digital Twin plays a significant role in reshaping industries.

1.2 Contribution

This study makes a contribution by synthesizing findings from diverse research to provide a comprehensive knowledge of Digital Twins. The emphasis is on healthcare, smart cities, and manufacturing, and it provides useful direction for both researchers as well as industry practitioners.

1.3 Methodology

The methodology involves a rigorous review of literature from 2015 to 2019, with a focus on reliable sources such as ACM, IEEE, and Science Direct. A total of 177 publications were reviewed, constituting the basis of the report's findings.

1.4 Conclusion

The research concludes by recognizing the rise of Digital Twins, especially in the particularly in manufacturing. However, it highlights a significant research gap in healthcare and smart cities. The need for standardization in Digital Twins terminology is also emphasized.

2 Limitations
2.1 First Limitation

One significant limitation is the primary focus on manufacturing, which overshadows potential uses in healthcare and smart cities. This leads to an imbalance in the coverage of Digital Twins across industries.

2.2 Second Limitation

Another limitation lies in the exploration of the relationship between AI and Digital Twins. Although acknowledged, further research is needed to fully understand the extent of this link.

3 Synthesis

The synthesis predicts a time when digital twins and AI will be harmoniously integrated throughout sectors. Healthcare, smart cities, and manufacturing might all undergo revolutionary changes as a result of this convergence. On the other hand, it emphasizes how important it is to understand the complexities of AI and define terms related to digital twins.