

Studienprojekt oder Bachelorarbeit (Umfang 3 – 6 Monate)

Topic:

Analysing the Characteristics of Augmented Reality Remote Maintenance (ARRM) Literature

Project task:

A systematic literature review (SLR) is an aggregation of primary study results on a specific research question. *“A review of prior, relevant literature is an essential feature of any academic project. An effective review creates a firm foundation for advancing knowledge. It facilitates theory development, closes areas where a plethora of research exists, and uncovers areas where research is needed.”* (Webster & Watson, 2002)

According to vom Brocke et al. (2009) a SLR consists of five phases: (1) definition of review scope, (2) conceptualization of topic, (3) literature search, (4) literature analysis and synthesis, and (5) research agenda. The aim of this project is to perform a part of phase (4) literature analysis and synthesis on ARRM literature. In particular, the student’s task is to code and analyse a data set of academic papers provided. To this end, first-cycle coding is to be performed according to a code book provided by APPRISE researchers, while second-cycle coding (coding for pattern and categories) is the student’s own analytical task.

The scientific project includes the following activities:

- Applying given code rules (code book) to a given literature data set (first-cycle coding)
- Developing categories (second-cycle coding) based on first-cycle codes to answer a research question of your own choice
- Preparing the results in Citavi and Excel
- Submission of the Citavi and Excel file
- Submission of a written report / thesis in German or English, including a method section, which meets the standards of scientific work in terms of form, structure, and approach

References

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- Bottani, E., & Vignali, G. (2019). Augmented reality technology in the manufacturing industry: A review of the last decade. *IJSE Transactions*, 51(3), 284–310. <https://doi.org/10.1080/24725854.2018.1493244>
- Booth, A., Sutton, A., & Papaioannou, D. (2016). *Systematic approaches to a successful literature review* (Second edition). Sage.
- Egger, J., & Masood, T. (2020). Augmented reality in support of intelligent manufacturing – A systematic literature review. *Computers & Industrial Engineering*, 140, 106195. <https://doi.org/10.1016/j.cie.2019.106195>
- Fernández del Amo, I., Erkoyuncu, J. A., Roy, R., Palmarini, R., & Onoufriou, D. (2018). A systematic review of Augmented Reality content-related techniques for knowledge transfer in maintenance applications. *Computers in Industry*, 103, 47–71. <https://doi.org/10.1016/j.compind.2018.08.007>
- vom Brocke, J., Simons, A., Niehaves, B., Niehaves, B., Reimer, K., Plattfaut, R., & Cleven, A. (2009). RECONSTRUCTING THE GIANT: ON THE IMPORTANCE OF RIGOUR IN DOCUMENTING THE LITERATURE SEARCH PROCESS. *ECIS 2009 Proceedings*. <http://aisel.aisnet.org/ecis2009/161>
- Webster, J., & Watson, R. T. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS Quarterly*, 26(2), xiii–xxiii.