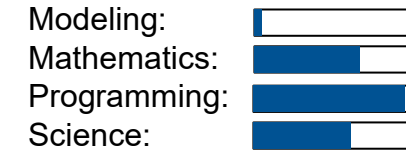


Automated Construction Reporting Using Computer Vision and Generative AI

Project Characteristics



Task

In construction management, daily reports are critical for documenting progress, resolving issues, and maintaining records. This project explores automating the generation of construction reports using computer vision (CV) and generative AI.

- Review literature on CV and AI in construction report generation.
- Prepare and analyze video data from the TUM Kérés KITA construction site.
- Implement CV algorithms for resource and productivity tracking.
- Integrate a generative AI model to create daily reports.
- Develop a user interface for video management and report generation.
- Evaluate the system on accuracy and usability for construction management.



Figure 1: Kérés KITA 3D Model (TUM-Campus) [2]



Figure 2: Kérés KITA Construction Project Camera View 1

[1] Xiao, B., Wang, Y., Zhang, Y., Chen, C., & Darko, A. (2024). Automated daily report generation from construction videos using ChatGPT and computer vision. *Automation in Construction*, 168.

<https://doi.org/10.1016/j.autcon.2024.105874>

[2] <https://www.german-architects.com/de/architecture-news/meldungen/keres-kita-fur-den-tum-campus>