Welcome to the Construction Classification System Database for Understanding Resource Use in Buildings.

This database provides a novel dataset and a building material data structure to facilitate study of resource use in building design and construction. The ontology developed for this database uses UniFormat (CSI and CSC, 2010) in conjunction with MasterFormat (CSI and CSC, 2016) for organizing and storing the building material data.

The dataset was developed by collecting design or construction drawings for the studied buildings and performing material take-offs based on the drawings. The ontology is based on Uniformat and MasterFormat to facilitate interoperability with existing construction management practices, and to suggest a standardized structure for future MI studies. The structure of the database and these guidelines builds on the structure presented by (Heeren & Fishman, 2019).

The initial database version is created by the research team supervised by Prof. Shoshanna Saxe at the University of Toronto and published in the journal Scientific Data (Guven et al. 2022) in February 2022 to describe the dataset and the associated methods and details.

Thank you for considering contributing to the database. Data contributors must follow the steps detailed below and must ensure that their inputs do not infringe any intellectual property or copyright agreements.

References

i. CSI and CSC. (2010). UniFormat - A Uniform Classification of Construction Systems and Assemblies. Constructions Specification Institute (CIS) and Construction Specifications Canada (CSC).

ii. CSI and CSC. (2016). MasterFormat Numbers & Titles (pp. 1–186). pp. 1–186. Constructions Specification Institute (CIS) and Construction Specifications Canada (CSC).

iii. Guven, G., Arceo, A., Bennett, A., Tham, M., Olanrewaju, B., McGrail, M., Isin, K., Olson, A. W., and Saxe, S. (2022). "A construction classification system database for understanding resource use in building construction." Scientific Data, Springer US, 9(1), 42.

iv. Heeren, N., & Fishman, T. (2019). A database seed for a community-driven material intensity research platform. Scientific Data, 1–10. https://doi.org/10.1038/s41597-019-0021-x