7. CONCLUSION

Smart cities raise the expectations for citizen's engagement and increase their digital footprint. As manufacturers brainstorm, envision, and plan smart city developments, citizens found themselves pruned out and set aside for later or forgotten altogether. Yet, the success of smart cities rely on general citizens' engagement into these spaces enacted by an assemblage of programmed technologies and data performed from technical experts. We revealed a computational representation of these spaces using advances in Internet of Things (IoT) that shape cyberphysical learning environments. We also advocated progressive learning processes within these environments, following a model-based learning scheme that integrates physical assets as sources of instruction. The proposed algorithm asserts digital competencies within specific smart city contexts. A case study illustrating the proposed cyberphysical learning approach is discussed and analyzed along contemporary smart-grid developments, where smart-homes augmented or fitted with IoT technologies empower inhabitants to feedback on their energy usage and adopt behavioral changes that expand their digital smart citizenship competences. Ongoing work aims at demonstrating the proposed cyberphysical learning approach within a prototype implementation of a connected home to validate incremental advancements in smart digital citizenship competence.

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