

5G-edge spatial computing for Smart Cities

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More than 1 billion jobs, almost one-third of all jobs worldwide, are likely to be transformed by technology in the next decade, according to OECD estimates. In addition, 5 billion people today lack access to proper surgical and anesthesia care and current training models cannot meet this demand. This growing need for continuous upskill and reskill becomes even more crucial in the post COVID-19 pandemic era. Virtual Reality (VR) and 5G spatial computing technologies can pose as the next final frontier regarding medical psychomotor/cognitive training, education, and empowerment in smart cities. VR/AR can provide the means for remote qualitative education (knowledge) and training (skills), using affordable technology with personalized, on-demand and smooth learning curves. Based on recent major advances in the field of 5G edge computing, neuroscience, and spatial computing: "VR/AR shares with our brain the same basic mechanism: embodied simulations". Such immersive technologies can facilitate continuous learning, provide curriculum programs and self-improvement opportunities that both expand medical professionals' abilities as well as minimize skill gaps in their training. These spatial computing applications are based on latest advances on real-time 3D graphics, computer vision, novel algebraic representations, simulation models, gamification, analytics, deep learning and 5G cloud edge computing, that allow intelligent education & training and further optimization/maximization of the desired learning outcomes. Thus the main premise of this talk is that immersive technology applications can transform residents' training, self-reliance and decision-making in the smart city of the near future.