Principal Investigator: Dr. Paul Oh

Title: VR/AR Enabled Co-bots

Abstract:

Virtual- and Augmented-Reality (VR/AR) are consumer-level technologies with a large ecosystem of users and developers. Their accelerated growth, industry interest, and emerging markets stem from its physics-engine middleware and repository of digital assets. These greatly simplify the creation and customization of immersive worlds. Recently, VR/AR has been used to overcome challenges in teaching robot tasks. This HOT motivates VR/AR collaborative robots (co-bots) to meet service needs. A 5-unit syllabus prescribes authentic hands-on training for both STEM and non-STEM college students, to yield turnkey co-bots with VR/AR. Meal preparation using co-bots is the case study to acquire fundamentals. The study extends to use cases for service needs in Nevada's hospitality sector and NASA astronauts in deep space. The net effect gives students training to yield turnkey co-bots for their creative endeavors, entrepreneurial ambitions, and/or societal contributions.