We propose that Cyber Security Gaming and Simulations Cloud (CGSC) academies be built to prepare and train K12 teachers and students, and College faculty and students to prepare the workforce in Cyber Security, Cyber Science, Robotics, Sensors, Internet of Things (IoT) technologies, RFID, cognitive computing, machine learning, artificial intelligence and blockchain technology using gaming and simulations as a key knowledge acquisition, training technique and skill drilling method for overall cyber defense preparedness. We propose that partnerships be formed among Government, Universities, community colleges, supported by industry and community partners, to meet the needs of the communities all across USA. Moreover, we propose to addresses the severe and critical needs identified by both the Government and Private Sector for highly trained personnel in cyber security, cyber warfare, autonomous systems, radar and cyber communications, internet of things technologies and blockchain based security models in these cloud based cyber science academies. Over a 3-year period, we propose to implement an innovative and engaging (NICE based) curriculum that appeals to younger populations, students in middle and high schools, as well as college students.

The curriculum should be designed using robotics, sensors, cloud computing, cognitive computing, artificial intelligence, games and simulations as major components to be taught once a week (College Faculty and Students) and Saturday Academies (High School Teachers and Students) supported by a powerful academic cloud system. This would provide a good mix of hardware and software systems security as well as the need to collaborate with people, systems and processes in a secure distributed environment. In preparing the workforce to meet such challenges, Government recognizes the following as strategic areas where the shortage of highly trained personnel is severe and critical. These areas include cyber security, cyber science, cryptography, Artificial Intelligence, Robotics, machine learning, internet of things and machines, Autonomous systems, Counter Weapons of Mass Destruction (WMD), Cyber Science and Technology, Data to Decisions Systems, Electronic Warfare/Electronic Protection, Engineered Resilient Systems and Human Systems among others..

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