

SenSIP Seminar Series

Quantum Machine Learning Simulations

Presenter: Glen Uehara, General Dynamics, Quantum Lab
(enrolled also in the PhD program at ASU)

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Abstract

It is generally recognized that quantum inspired algorithms achieve exponential speed over classical algorithms. This advantage is seen when these algorithms run on quantum systems. The near-term quantum processors are still unpredictable and in its infancy. They are also cost-prohibitive, and reliability are sometimes an issue. In the short term, to gain insight in the effectiveness of these algorithms, quantum system simulation is available to model and develop these algorithms. The advantage of this is that the model can be simulated on a classical computing system. The simulation allows for individuals to learn about the quantum algorithms and its approach. The current research is looking at quantum algorithm approach on pattern recognition problems using quantum simulators.

Biography:



I have a BS and MSE in Electrical Engineering, from University of Hawaii and Arizona State University, respectively. Since my first degree, I have been working as a communication and signal processing engineering in both commercial and defense industry. In the recent years, I have also earned several certifications in cyber security and have applied these techniques to my programs. Currently, Ph.D. student in the School of Electrical, Computer and Energy Engineering at ASU, specializing in Quantum Information Algorithms specifically for Signal & Information Processing and Machine Learning. I am also currently working in the Quantum Laboratory at General Dynamics. I am hoping to explore new techniques and methods in Quantum Algorithms to grow this knowledge for both ASU and GD.

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