

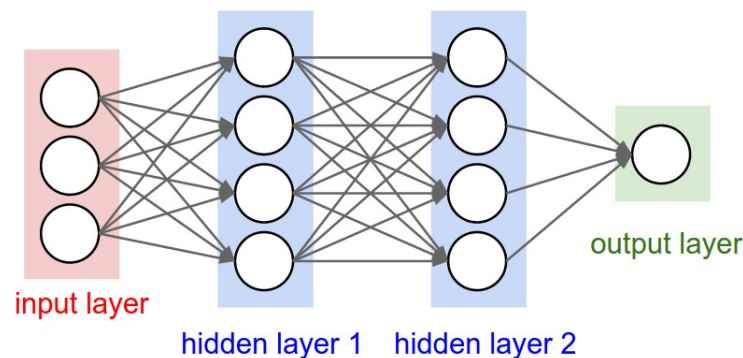
Student Research Talks (StReeTs)

Mason Experimental Geometry Lab (MEGL)

Deep Learning for RF Device Fingerprinting in Cognitive Communication Networks

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Abstract

In the research being discussed, deep learning is used to detect physical-layer attributes for the identification of cognitive radio devices. The method is based on the empirical principle that manufacturing variability among wireless transmitters that conform to the same standard creates unique, repeatable signatures in each transmission, which can then be used as a fingerprint for device identification and verification. In this talk, background on convolutional neural networks and signal processing concepts will be discussed, as well as results regarding the identification and verification of commercial ZigBee devices.

Date: Friday, March 9, 2018

Time: 2:30pm–3:20pm

Place: Exploratory Hall 4106

Pizza and soda will be served at the presentation.

For further information or for special accommodations, please contact Sean Lawton via email at seanlawton@gmail.com or drop by the MEGL.