**EEEN Application of Neural Networks – Navy Focus**

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| **Week 1:** Anatomy of a single neuron Model and Network Architectures, Transfer functions, Topology of neural network architectures Recurrent neural network | Lecture#1  Lecture#2  Lecture#3  Reading Paper#1 |
| **Week 2:** Perceptron, Learning rules, Convergence and Applications | Lecture#4  Lecture#5  Lecture#6  Reading Paper#2 |
| **Week 3:** Activation functions and Regressions | Lecture#7  Lecture#8  Lecture#9  Reading Paper#3 |
| **Week 4:** Hebbian Learning Linear associator The Hebb rule Variations of Hebbian learning | Lecture#10  Lecture#11  Lecture#12  Reading Paper#4 |
| **Week 5-6:** Multi-Layer Networks; Backpropagation Configuration Training algorithms and variations Stability Recurrent Self-Organizing map Counter propagation network Group Method of Data Handling (GMDH) | Lecture#13  Lecture#14  Lecture#15  Reading Paper#5  Lecture#16  Lecture#17  Lecture#18  Reading Paper#6 |
| **Week 7:** Self-Organizing Maps | Lecture#19  Lecture#20  Lecture#21  Reading Paper#7 |
| **Week 9:**  Convolutional Networks | Lecture#22  Lecture#23  Lecture#24  Reading Paper#8 |
| **Week 10:** Recurrent Networks | Lecture#25  Lecture#26  Lecture#27  Reading Paper#9 |
| **Week 11:** Generative Adversarial Networks  **Week 14:** Deep Belief Nets | Lecture#28  Lecture#29  Lecture#30  Reading Paper# 10 |