Fuzzy Logic and Neural Networks(MCS-E3)

(Offered through SWAYAM only)

https://onlinecourses.nptel.ac.in/noc21_ge07/preview

Unit 1 : Introduction to Fuzzy Sets

Unit 2 : Introduction to Fuzzy Sets (contd.); Fuzzy reasoning

Unit 3 : Fuzzy reasoning (contd.); Fuzzy clustering

Unit 4 : Fuzzy clustering (contd.); Fundamentals of Neural Networks

Unit 5 : Multi-layer Feed-Forward Neural Network; Radial Basis FunctionNetwork

Unit 6 : Self-Organizing Map; Counter-Propagation Neural Network;Recurrent Neural Networks; Deep Learning Neural Network

Unit 7 : Genetic-Fuzzy system; Genetic-Neural System

Unit 8 : Neuro-Fuzzy System; Concepts of Soft Computing andComputational Intelligence; Summary of the Course

Books and references

• Soft Computing: Fundamentals and Applications by D.K.Pratihar, Narosa Publishing House, NewDelhi, 2014

• Fuzzy Sets and Fuzzy Logic: Theory and Applications byGeorge J. Klir, Bo Yuan, Prentice Hall, 1995

• Neural Networks: A Comprehensive Foundation by S. Haykin,Prentice Hall PTR Upper Saddle River,

NJ, USA, 1994