

Open Course Title: Data Science Using Artificial Intelligence

Target Students from Branches: ECE/TCE/EEE/CSE/Mech/Civil/MCA

The total duration of the course: 25 Hours.

No. of Lecture hours: 5 Hours.

No. of hands-on / Practical: 20 Hours.

Abstract

We are in the era of computing technology that many are calling the Internet of Things (IoT). Machine to machine, machine to infrastructure, machine to environment, the Internet of Everything, the Internet of Intelligent Things, intelligent systems—We see the IoT as billions of smart, connected “things” (a sort of “universal global neural network” in the cloud) that will encompass every aspect of our lives, and its foundation is the intelligence that embedded processing provides. The IoT is comprised of smart machines interacting and communicating with other machines, objects, environments, and infrastructures. As a result, huge volumes of data are being generated, and that data is being processed into useful actions that can “command and control” things to make our lives much easier and safer—and to reduce our impact on the environment. The creativity of this new era is boundless, with amazing potential to improve our lives. The following thesis is an extensive reference to the possibilities, utility, applications and the evolution of the Internet of Things.

Open Course Details

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| CO1: Acquire the basic Concepts of machine learning and Python Programming. |
| CO2: Apply neural networks and classifiers for machine learning problems. |
| CO3: Develop machine learning models using python |

Schedule

| Day 1:12/02/2019 | | | |
|-------------------------|---|---|----------------------|
| Time | Topics | Resource Person Details | CO-PO Mapping |
| 9:30am – 11:00am | Registration+ Inauguration | Arpitha Anushree Amudha | - |
| 11:15am -12:30pm | Introduction to python (values, Data types, expressions statements | Prof. Vinutha K,Prof. Veena Asst.Prof.Dept of ISE,BMSIT&M | CO1(PO1) |
| 1:30pm – 3:30pm | Writing functions, Exceptions | Prof. Vinutha K,Prof. Veena Asst.Prof.Dept of ISE,BMSIT&M | CO1(PO1) |
| Day 2:13/02/2019 | | | |
| Time | Topics | Resource Person Details | CO-PO Mapping |
| 9:30am – 11:00am | Introduction to Machine Learning, concept learning and decision theory | Prof. Vinutha K,Prof. Veena Asst.Prof.Dept of ISE,BMSIT&M | CO1(PO1) CO3(PO2) |
| 11:15am -12:30pm | ML tools NumPy, matplotlib, pandas | | |
| 1:30pm – 3:30pm | Find S algorithm explanation and execution | | |
| Day 3:14/02/2019 | | | |
| Time | Topics | Resource Person Details | CO-PO Mapping |
| 9:30am – 11:00am | Bayesian belief networks | Prof.Chandrashekhar K T Prof. Gireesh Babu C N Asst.Prof.Dept of ISE,BMSIT&M | CO3(PO2) |
| 11:15am -12:30pm | Naïve Bayesian classifier for data set classification, document, medical data | | |
| 1:30pm – 3:30pm | K-nearest- Neighbors | | |
| Day 4:15/02/2019 | | | |
| Time | Topics | Resource Person Details | CO-PO Mapping |
| 9:30am – 11:00am | ANN-Introduction, Neural Networks representation | Prof. Mahalakshmi Asst.Prof.Dept of ISE,BMSIT&M | CO2(PO1) |
| 11:15am -12:30pm | Back propagation algorithm and execution | | |
| 1:30pm – 3:30pm | K-means algorithms and execution | Prof. Shanthi D I Asst.Prof.Dept of ISE,BMSIT&M | CO3(PO2) |
| Day 4:16/02/2019 | | | |

| Time | Topics | Resource Person Details | CO-PO Mapping |
|-------------------------|------------------------------------|--------------------------------|----------------------|
| 9:30am – 11:00am | Decision tree concepts | Prof. Gireesh Babu C N | CO3(PO2) |
| 11:15am -12:30pm | ID3 algorithm and execution | Asst.Prof.Dept of ISE,BMSIT&M | |
| 1:30pm – 3:30pm | Valedictory function | - | |

Open course coordinator

HOD ISE