



Jansons Institute of Technology
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TWO DAY NATIONAL LEVEL WORKSHOP

On

AI in CS: Modern Artificial Intelligence Techniques for Cyber Security

Report

A Two Day National Level Workshop on AI in CS: Modern Artificial Intelligence Techniques for Cyber Security was conducted by the Department of Computer Science and Engineering on 03rd and 04th January 2019 at CC3 Laboratory. The workshop got started by 9.45am with an Inaugural function. Third year student Ms. Ramya Devi welcomed the gathering. The Guest speaker Mr. R Vinayakumar, Research Associate & Cognitive Security Practitioner from the Department of Computational Engineering and Networking, Amrita Vishwa Vidyapeetham, Coimbatore delivered the lecture. The workshop was designed for Computer Science graduates who are willing to learn, modern artificial intelligence in cyber security and their applications in simple and easy steps using Python as a programming language. Students and faculty members from various colleges attended the workshop.

The students were taught to code math using python linear algebra, optimization theory, probability, information theory and statistics by the guest speaker. This introduced to the basics of Python machine learning too. The speaker also addressed how to use Python and its libraries to explore the data with the help of matplotlib and Principal Component Analysis (PCA), to preprocess the data with normalization and later how to split the data into training and test sets. As an additional outcome, the students also learnt the use of SVM to construct another model to classify the data. They used the Keras deep learning library to train the first neural network on a custom image dataset, and from there, they implemented their first Convolutional Neural Network (CNN).

The second day, the session started with the introduction of Intrusion detection systems to detect anomalies with the aim of catching hackers before they do real damage to the network. Domain generation algorithms (DGA) and uniform resource locator (URL) data analysis was also discussed in the workshop. The students learnt the detection of email spam. The speaker also gave tips for the placement and higher education at the end of the session.

The valediction ceremony started by 3.15pm and Ms.Rithu of II year CSE delivered the vote of thanks. The participants also gave positive feedback about the workshop. The Head of the Department Dr. A.Velayudham and the Guest Speaker Mr. R. Vinayakumar distributed the certificates for the participants and the function came to an end with a grand success.