NEWSLETTER

ROBERT BOSCH CENTRE FOR DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

RBCDSAI IITM

Training of AI and ML courses for Indian Navy Officers Batch 2
November 18 - 29, 2019

RBCDSAI organized a training course on Artificial Intelligence and Machine Learning from 18th November to 29th November 2019 for 35 Senior officers from Indian Navy. The officers were trained on fundamental topics such as statistics, regression and advanced topics such as NLP and computer vision. They also underwent a python lab training. Prof. B. Ravindran and Prof. Nandan Sudarsanam initiated the session on the introduction and use-cases, Introduction to Machine learning & AI, Introduction to Probability, Probabilistic modelling, Data visualization and simulation, LDA and QDA .This was followed by a series of sessions from Prof. Rahul Marathe, Prof. Usha Mohan, Prof. Raghunathan Rengaswamy, Dr. Nirav Bhatt, Dr. Harish Guruprasad, Dr. Arun Ayyar, Dr. Sudarsan Santhiappan, Dr. Sridharakumar Narasimhan and Dr. Mitesh Khapra on covering various topics on Artificial Intelligence and Machine Learning.

Sixth RBCDSAI Workshop on Recent Progress in Data Science and AI
27 th November 2019

The Robert Bosch Centre for Data Science and Artificial Intelligence organized 6th workshop on Recent Progress in Data Science and AI. The event was held on 27th November 2019 at Bio Technology Seminar Hall, There are 100+ participants including students, researchers, faculties and industrials. The highlight of the event begin with the talk by Prof. Srinivasa Chakravarthy (BT) regarding "Computing with neural oscillators". This was followed by a series of presentation from Researchers at RBCDSAI. Mr. Deepak Maurya "Hypergraph partitioning using tensor eigenvalue decomposition". Ms. Malvika Sudhakar "Novel ratio – metric features enable the identification of new driver genes across cancer types". Dr. Sreeja R. " Multivariate analysis of spectral data for building kinetic models". Mr. Vijayanand Digge "Data-driven controller design for performance management of web-servers in cloud". The seasons were interactive and helped delegates further their knowledge in Artificial Intelligence and Machine Learning

Workshop on Smart Mobility (Data–driven Models and Algorithms)
15th to 17th December 2019

RBCDSAI Coorganized this workshop. The Sessions include, invited Talks by Prof B. Ravindran regarding Challenges with Data (science) for Vehicle Detection in Indian Traffic, followed by " where is my train?" by Nizam SP, from Google. Venkatesh Kannan, Flipkart talked about "Solving the vehicle routing problem for optimizing shipment delivery."

Surendra Reddy Kancharla, IIT Madras talk covered Multi-Depot Two Echelon Capacitated Vehicle Routing Problem with Heterogeneous Fleet. The final Thematic session by Prabhjot Kaur was on One-stop Integrated Solution for Smart Management of EV Infrastructure

The second day session talks include Key notes from Speaker Satish Ukkusuri, Purdue on "In search of scaling laws of human mobility", Srinivas Peeta, Georgia Tech - Information Flow Propagation and Topologies for Control Under Connected And Autonomous Vehicles. The Panel Discussion (Last mile connectivity).

The third day session was started with Thematic Session 4 (Machine Learning for transportation) Vetri Elango, Google- Machine Learning in Demand Forecasting, Arun Tangirala, IIT Madras- Use of Machine Learning In Transportation, Avinash Achar, TCS - Predictive Modelling Approaches for Bus Travel Time Prediction. There was a Thematic Session on **Emerging Technology**, Vinayak Dixit, UNSW - A simple crowdsourced delay based traffic control, Ramakrishna Pasumarthy, IIT Madras - Vehicle Autonomy in Lane less Multi-Commodity and Heterogeneous Traffic, Shankar Akella, Ashok Leyland - Ashok Leyland's endeavours in Smart Mobility followed by Panel Discussion on **Moving Forward Smartly**.

Certificate Programme in Technology and Management (CTM)
21st December 2019

The Campus Connect Session of Course on Certificate in Technology and Management (run by IIMB and RBCDSAI,IITM), conducted on 21st December 2019.

About 20 students of CTM Batch 2 attended this Campus Connect Session. Prof. Arun Tangirala, IITM delivered lectures followed by python intro lab session, program. The students have an experience of about 15 years and are from varied background (both education and career).

RBCDSAI LatentView Colloquium Series
19th Dec 2019

Despite the tremendous advances that have been made in the last decade on developing useful machine learning applications, their wider adoption has been hindered by the lack of strong assurance guarantees that can be made about their behavior In this talk, we consider how formal verification techniques developed for traditional software systems can be repurposed to ensure the safety of reinforcement learning (enabled ones, a particularly important class of machine learning systems for which assurance guarantees are especially critical.

Assured Reinforcement Learning by Prof. Suresh Jagannathan, Purdue University

Prof Suresh served as a program manager in the information Innovation office at DARPA, where he conceived and led programs in Probabilistic Reasoning and Machine learning, software systems, and adaptive computing. He has also been a visiting Faculty at Cambridge University, where he spent a sabbatical year in 2010 and, prior to joining Purdue , was a senior research scientist at the NEC Research Institute in Princeton, N.J. He received his Ph.D. from MIT.

Following Visiting Faculty hosted by RBCDSAI

Sriraam Natarajan

Dr. Sriram Natarajan is an Associate Professor and the Director for Center for ML at the Department of Computer Science at the University of Texas Dallas. He was previously an Associate Professor and earlier an Assistant Professor at Indiana University, Wake Forest School of Medicine, a post-doctoral research associate at the University of Wisconsin-Madison and had graduated with his PhD from Oregon State University.

Srinivasan Parthasarathy

He directs the Data Mining Research Laboratory which is a part of the High End Systems Group and affiliated with the Laboratory for Artificial Intelligence Research. He is broadly interested in the following areas:
1. High Performance Data Analytics.
2. Graph Analytics and Network Science.
3. Machine Learning and Database Systems.

Anand Raghunathan

Anand directs the Integrated Systems Laboratory in the School of Electrical and Computer Engineering at Purdue. His group's research spans various topics in VLSI and Computer Engineering, including System-on-chip design, domain-specific architecture, computing with nanoscale post-CMOS devices, and heterogeneous parallel computing. He is currently Chair of the VLSI area in the School of ECE.

Associate Research Program hosted by RBCDSAI

Dr. Resmi from IIT Guwahati

Seminar on causal inference at RBCDSAI.
Discussions with Prof. Nirav Bhatt on our collaborative work on causal modeling of gene networks and preliminary work for synthetic data generation. Set a work plan for various collaborative work with Prof. Raghu (Bosch project for battery monitoring, Kaatru or air quality monitoring, and root cause analysis Discussed possible avenues for future collaboration with Prof. Ramakrishna, visiting faculty from VIT. Project discussions with various researchers/staff at RBCDSAI

Dr. Hemanth Kumar Tanneru from IIPE, Visakhapatnam.

He is an Assistant Professor in the Department of Chemical Engineering at Indian Institute of Petroleum and Energy (IIPE) Visakhapatnam. I also hold a Vice-chairman position in the career development cell at IIPE. Modeling and Optimization of Electrochemical Energy systems, Bio-based low and micro energy harvesting, Data analytics and Machine learning for Process industries.

Reach Us

RBC DSAI
ROBERT BOSCH CENTRE FOR DATA SCIENCE
AND ARTIFICIAL INTELLIGENCE IIT MADRAS
5th floor, Block II, Bhupat and Jyoti Mehta School of Biosciences,
Indian Institute of Technology Madras, Chennai-600036

Scan to visit our website