

Data Science is now being offered as an academic program in many colleges and universities, both at the undergraduate and graduate levels. What is the take-away for students enrolled in these programs to be well prepared for the workforce? We can discuss the preparation from trained data scientists that the workplace expects, using as an illustration a project on analyzing IoT temperature streams that involved teams from Statistics and Computer Science at UConn and data analysts and engineers at The Hartford Steam Boiler (HSB), an insurance/reinsurance firm in Hartford, CT. The company uses temperature sensor nodes to monitor temperatures for thousands of institutional buildings across the United States to prevent pipe-freeze losses to its customers. For this to happen, it is essential to automate the prediction/detection of anomalies in the temperature sensor readings. We describe a customized hybrid approach based on an isolation forest (IF) algorithm for anomaly detection, predicting pipe-freeze, and notifying its customers. We also discuss how the company can use a statistical model based approach to learn from the observed data whether a customer is likely to have taken action to prevent potential pipe freeze. This is joint research involving faculty and graduate students in Statistics and Computer Science along with domain experts from the firm.



IOT DATA ANALYSIS: LEARNING AND ANOMALY DETECTION

PROF. NALINI RAVISHANKER

**Department of Statistics,
University of Connecticut, Storrs,
CT, USA**

THURSDAY
JANUARY 04

6:00 PM
Core 5

Organized by

**Mehta Family School of
Data Science & Artificial
Intelligence**

Indian Institute of Technology
Guwahati, Guwahati, Assam-
781039, India

All are welcome