

Report on webinar on “Application of Automated Machine Learning in the Electrical Industry”

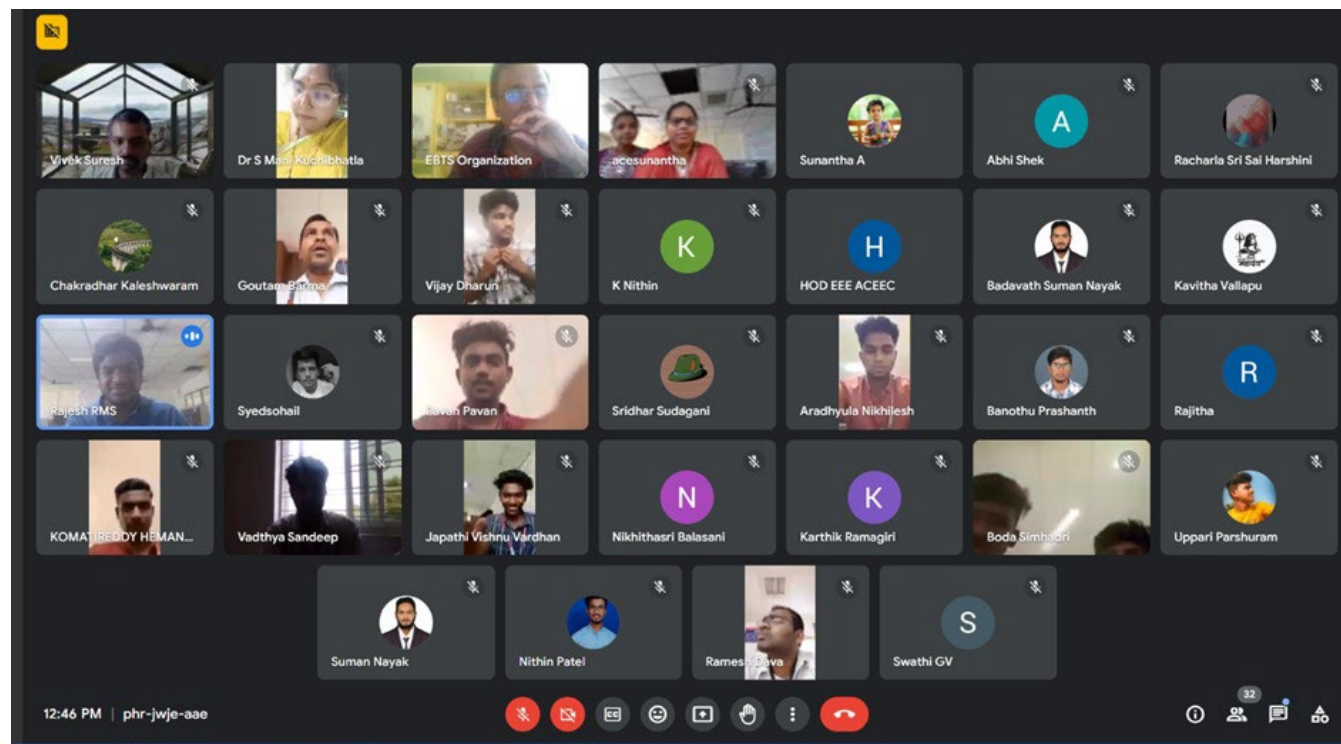
Title of the Event: Application of Automated Machine Learning in the Electrical Industry

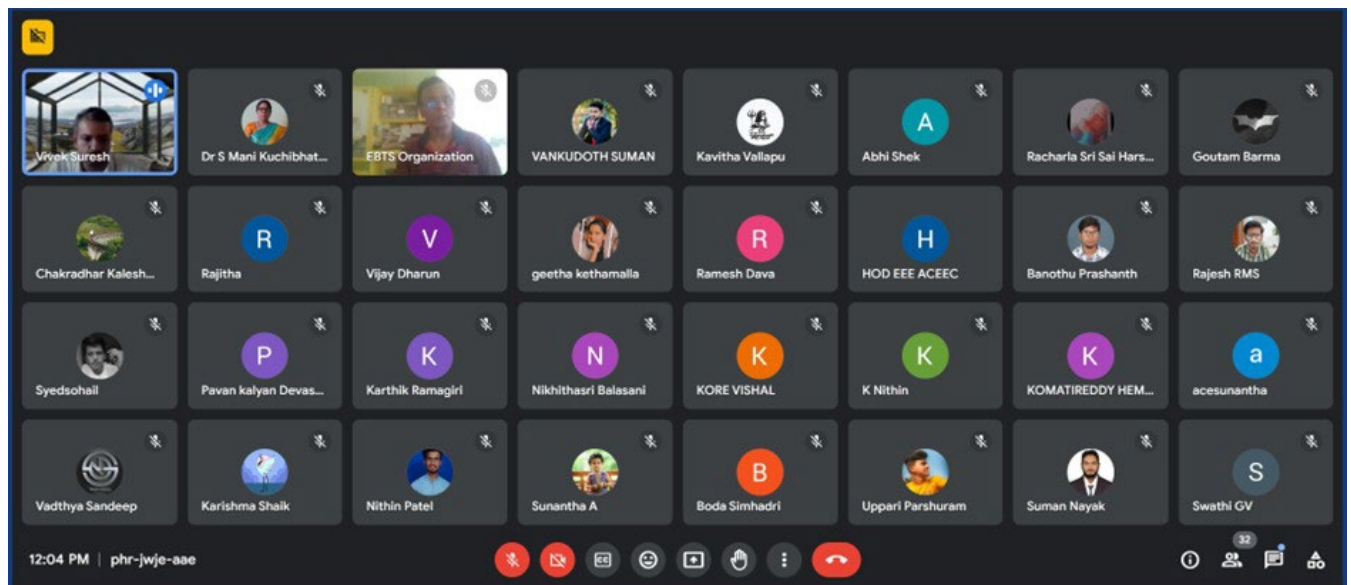
Held On: 10 April 2024

Coordinators:. A. Sunantha, Asst. prof.

Convener: Dr. S. Mani Kuchibhatla, Assoc Prof & HOD-EEE

A webinar on “Application of Automated Machine Learning in the Electrical Industry” was organized by Department of Electrical and Electronics Engineering, ACE Engineering College on 27th March 2024 from 11.00 AM to 1.00PM. The resource person for the session was Mr. Vivek Suresh, Business Partner, Enterprise Building Training Solutions. He is technologist having 17+ years of experience with primary expertise in DWBI, BigData, Data Science, Artificial Intelligence, Machine Learning and Deep Learning with exposure to US and UK markets in Banking and Insurance space handling consulting, people and delivery management roles with equal proficiency. It was a very informative webinar as Mr. Vivek Suresh enlightened the audience with Awareness of applications of Machine learning in Electrical Engineering like Fault detection & diagnosis, Load forecasting, Energy efficiency in buildings, Grid optimization and load balancing, Energy consumption forecasting, Smart meter data analysis & issue identification. He also explained case studies are using Power Bi. The webinar began with a word of appreciation by Dr. S. Mani Kuchibhatla, HOD EEE. The session saw an overwhelming response from I year, II year and III-year students of the department. A total of 45 students and faculty participated in the session.





Vivek Suresh (Presenting)

Various terminologies....drawing the boundaries

Artificial Intelligence (AI)
Human Intelligence Exhibited by Machines
Amazon purchase prediction Smart Email Categorization

Machine Learning (ML)
An Approach to Achieve Artificial Intelligence
Google Maps speed of traffic Facebook facial recognition
Netflix video recommendation

Deep Learning (DL)
A Technique for Implementing Machine Learning
Self-Driving Cars
Speech Recognition Robotics

Data Science
Scientific methods, algorithms and systems to extract knowledge or insights from big data

Data Analysis
Process of inspecting, cleansing, transforming and modeling data

Data Analytics
Discovery, interpretation, and communication of meaningful patterns in data

Data Mining

1950's 1980's 2010's

Big Data

11:04 AM | phr-jwje-ase

Vivek Suresh (Presenting)

Machine Learning Types

Machine Learning Types

- Supervised Learning**
 - Regression** (e.g.) Taxi Fare/ Housing price prediction
 - Classification** (e.g.) Sentiment/ Spam filter prediction
- Unsupervised Learning**
 - Clustering** (e.g.) Product Customer Segmentation
- Semi-supervised learning**
 - Clustering / Classification** (e.g.) speech analysis
- Reinforcement learning**
 - Classification / Control** (e.g.) Self-Driving Car

2:02 AM | Webinar on "Application of Automated Machine Lea..."

DELL

Vivek Suresh (Presenting)

Various terminologies....drawing the boundaries

The diagram illustrates the relationship between various data science and machine learning terminologies. It features two overlapping circles. The left circle is yellow and contains 'Artificial Intelligence (AI)' (Human Intelligence Exhibited by Machines, examples: Amazon purchase prediction, Smart Email Categorization), 'Machine Learning (ML)' (An Approach to Achieve Artificial Intelligence, examples: Google Maps speed of traffic, Facebook facial recognition, Netflix video recommendation), and 'Deep Learning (DL)' (A Technique for Implementing Machine Learning, examples: Self-Driving Cars, Speech Recognition, Robotics). The right circle is orange and contains 'Data Science' (Scientific methods, algorithms and systems to extract knowledge or insights from Big data), 'Data Analysis' (Process of inspecting, cleaning, transforming and modeling data), 'Data Analytics' (Discovery, interpretation, and communication of meaningful patterns in data), and 'Data Mining' (Discovery, interpretation, and communication of meaningful patterns in data). Below these circles is a horizontal bar labeled 'Big Data' with a timeline from 1950's to 2010's.

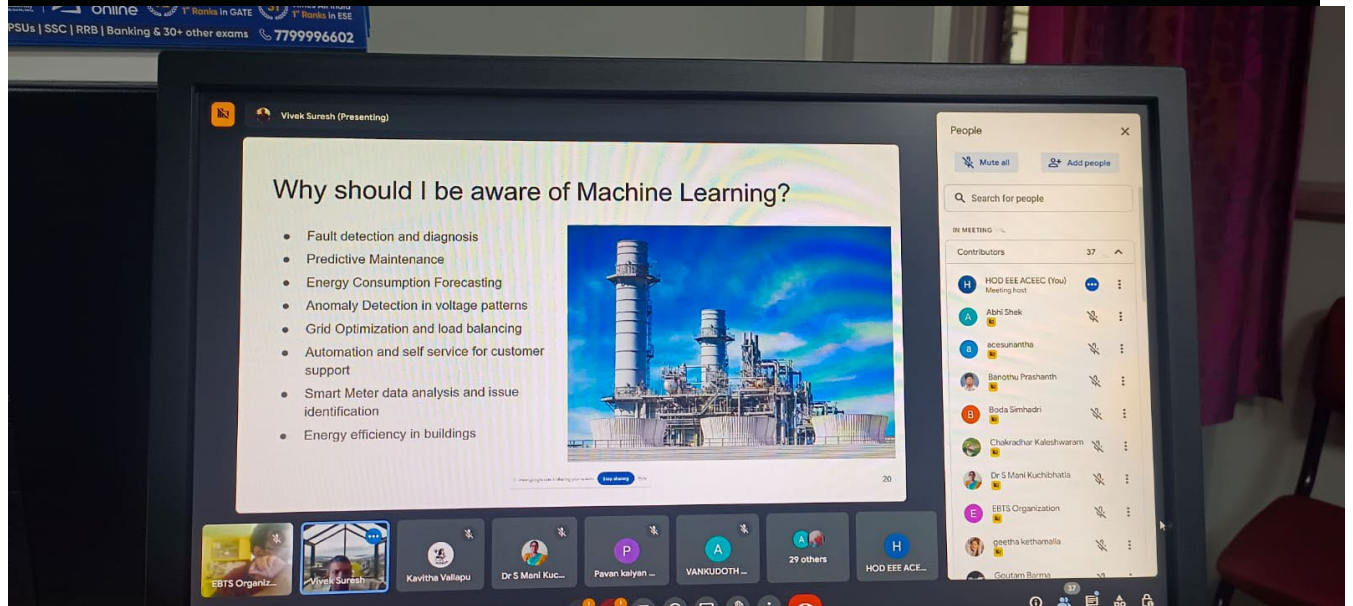
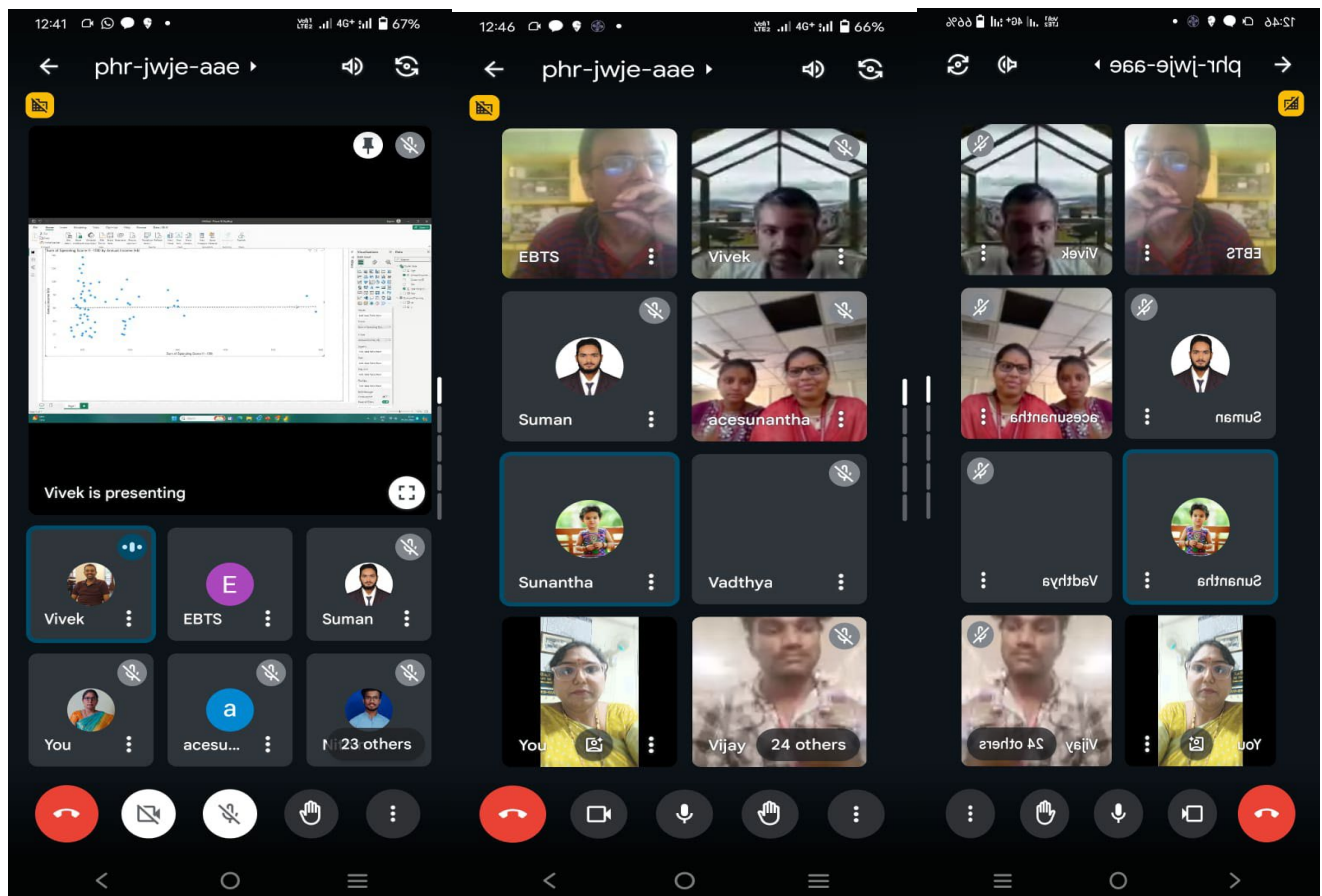
1:49 AM | Webinar on "Application of Automated Machine Lea..."

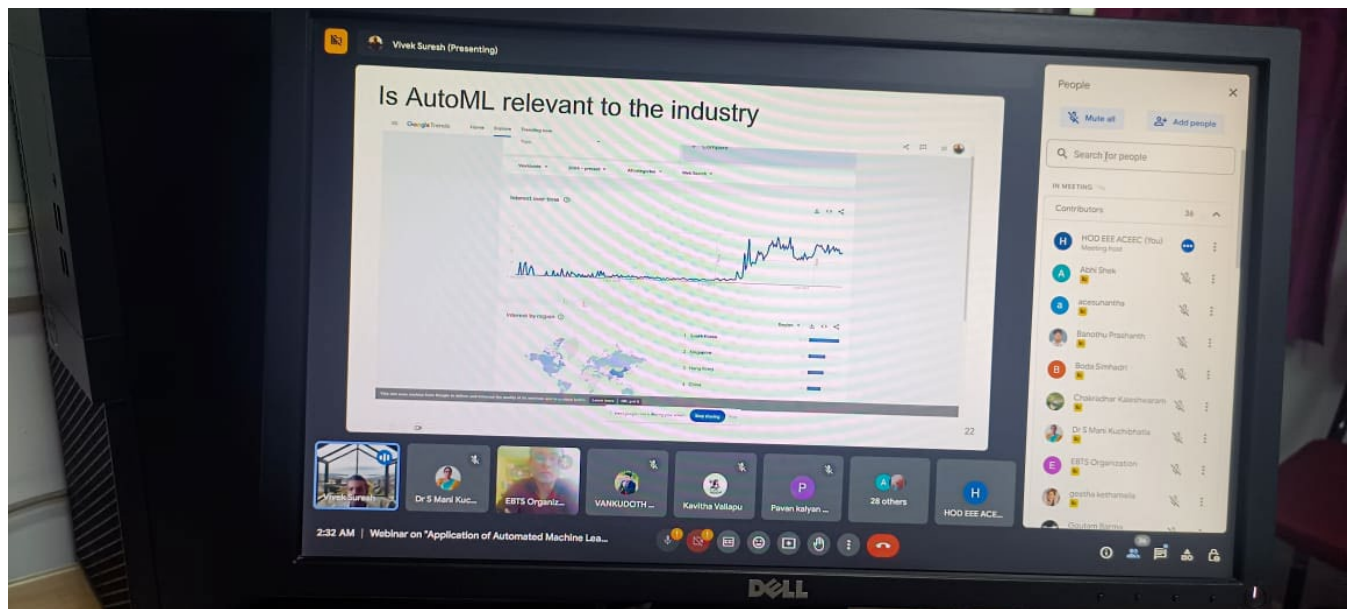
Vivek Suresh (Presenting)

Day in the life of a data scientist

The diagram illustrates the workflow of a data scientist. It starts with 'Problem Framing' (icon: target), followed by 'Data Prep & Annotation' (icon: document), 'Data Ingestion & Management' (icon: cloud), 'Partitioning' (icon: puzzle pieces), 'EDA & Quality Assessment' (icon: magnifying glass), 'Feature Engineering' (icon: cube), 'Modeling' (icon: puzzle pieces), 'Model Tuning' (icon: wrench), 'Evaluation & Selection' (icon: bar chart), 'Risk & Compliance' (icon: document with checkmark), 'Software Construction' (icon: code), 'Deployment' (icon: server), 'Consumption' (icon: monitor), and 'Model Maintenance' (icon: gear). A note states: 'Needs domain knowledge to do right; Hates doing; Enjoys doing and wants to keep doing it; Often lacks skills or methodology to do right.' Below the workflow, a text box says: 'In large organizations, a lot of "throwing over the wall" happens here ~85% of DS projects never get to the end of the pipeline [bit.ly/30PGSOZM]'. The timeline at the bottom shows 2:32 AM.

2:32 AM | Webinar on "Application of Automated Machine Lea..."







ACE

Engineering College

An Autonomous Institution

Ghatkesar, Medchal (Dist) Hyderabad, Telangana State -501301

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Webinar
on

"Application of Automated Machine Learning in the Electrical Industry"

Resource Person



Mr. Vivek Suresh
Business Partner
Enterprise Building Training
Solutions

Google Meet joining info
<https://meet.google.com/phr-jwje-aae>

Date: 27th March 2024
Timings:
 11.00AM to 12.00 Noon

Convener
Dr. S. Mani. Kuchibhatla
 Assoc.Prof.&HOD EEE

Principal
Dr.B.L. Raju

