

# Impact of AI Infrastructure in Andhra Pradesh

A presentation by Group-6



The Andhra Pradesh Transmission Corporation (APTransco), for the first time in India, released the day-ahead electricity forecasting model using AI) and ML to forecast next day's electricity consumption, including a day-ahead electricity demand for every 15 minutes. The development will enable the AP State Load Dispatch Centre (SLDC) officials to take decisions on electricity demand and supply, grid management and minimize power purchase cost. The forecasting model is being developed by Google and World Bank together, with the SLDC, with SLDC working on the initiative inhouse. As the system gets deployed, APTransco aims to extend the day-ahead forecasting models for wind energy, solar energy, market prices, central generating stations' surplus and frequency.

# ➤ Infrastructure Development

Infrastructure Development is critical for economic growth. It plays a significant role in setting up of an enabling platform for sustainable economic development. It includes services such as Power (electricity), telecommunications, sewage and sanitation, gas, roads, railways, seaports, and airports which promote commercial activities, production and consumption. Government of Andhra Pradesh has been pursuing Mission Based Approach for leveraging the sectoral strengths to enable the state reach sustainable double digit growth of GSDP. The paper briefly reviews recent data for the newly formed Sunrise State of Andhra Pradesh in terms of Gross Value Added (GVA) and Gross State Domestic Product (GSDP) for the period 2013-17 through sectoral share and growth rates, and focuses on a few areas of infrastructure perspectives for Andhra Pradesh.



## ➤ *Helping farmers to increase crop yields*

The deep learning analytics solution implemented in Chittoor district helps local farmers to remotely monitor the crops, increase the crop's nutritional value and to reduce water consumption by up to 40%. This is done to meet the central government's target of doubling of farmers' income by the year 2022. Hewlett Packard Enterprise's Center of Excellence (CoE) and the Bengaluru based NGO Agastya International Foundation, set up AI and IoT technologies in the local farms of Guipalli, Chittoor. The solutions includes edge compute HPE Edge line EL300, onsite IoT modules, drone imaging and analysis, a user interface and dashboard for monitoring and reporting of various on-ground parameters and activities at the fields.



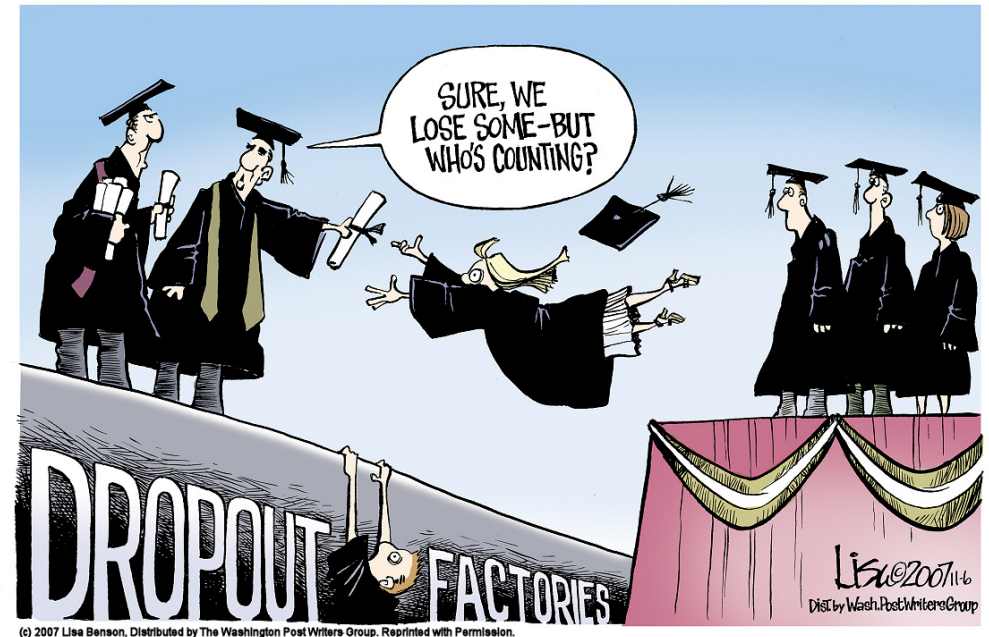
## ➤ *AI-based ID system for pensioners*

A pension is a type of retirement plan that provides monthly income after you retire from your position. The employer is required to contribute to a pool of funds invested on the employee's benefit. The Andhra Pradesh government has announced the introduction of an Artificial Intelligence (AI) based Realtime Beneficiary Identification System (RBIS) by October 2020. The RBIS will replace the old PDO system which is currently in place for pensioner identification. The system has already been deployed in East and West Godavari and Krishan districts for the last three months, as part of an experiment. Only after the successful implementation of the system has the officials have now decided to roll-out the technology state-wide, revealed the official.



# ➤ Identifying potential school dropout rate

Schools in India have been plagued by high dropout rates, especially at the upper elementary and secondary levels in the backward sections of the society. This trend is capable of causing a major dent in the human resource ambitions of the country. In light of increasing dropouts, the Andhra Pradesh government has been working in partnership with Microsoft to cover more than 5 million students in 10000+ schools as of 2017. By leveraging the power of machine learning and analytics, a Microsoft app is able to predict the chances of a student dropping out, based on patterns identified from complex datasets. This initiative by the South Indian state is aimed at taking corrective actions to keep young people in school by drafting proactive policies aided by AI-based intervention.



# ➤ Automatic monitoring of hygiene in schools

Andhra Pradesh State Government School Education Department has partnered with Tata Consultancy Services (TCS) for automatic monitoring of hygiene in the 45,000 government schools across the State using an Artificial Intelligence system. The system will automatically grade the sanitation in different areas such as commodes, urinals, wash basins and floors. It provides a mobile app for capturing images. The images, when passed to the AI engine, get categorized based on the cleanliness of the rooms while handling the variations of shape and design of floors, tiles and commodes. The system sends the response back to the user as well as to the portal for public review.





## ➤ Facial Recognition Tech in Schools

The Andhra Pradesh state government has announced it will deploy facial recognition software to address teacher absenteeism. Teachers in government schools will have to record their attendance twice a day through the system. The initiative is expected to reach nearly 189,000 teachers. Over the next month, a pilot project will be launched by the Department of School Education in four zones of the state, with the help of four different vendors. The government said that this step was to ensure that there is accountability and discipline in the state-run institutions. The system will send an attendance alert to administrative officials via SMS telling them whether the teacher is present or absent from school. Parents will also receive SMS updates on their children's arrival and departure from school.



# THANK you