#### **KARTHICK K**

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In pursuit of career enhancing opportunities in the field of

Data Analyst, Business Analyst, Data Engineering, Analyst, Energy Analyst, Spotfire Developer HVAC, Telecom & Battery Management

# **Professional Snapshot**

- An astute professional with 6 years of rich experience in Data Analytics, Modelling & Business Intelligence Solution on HVAC, Telecom & Solar industries.
- Currently associated with EcoEnergy Insights, Carrier. Bangalore—Senior Analyst.
- Exposure in Python, TIBCO Spotfire, My SQL, MS Excel & MS power point.
- Business Process Automation on Operational & Asset Management, Energy Management, developing innovative energy-saving program and technical design for various BMS system.
- Develop algorithms to bring value engineering analytics insights from large Datasets by using Python Programming Language with desired libraries (pandas, numpy, scikit-learn, plotly, Seaborn, etc).
- Proficient in TIBCO Spotfire to build creative visualizations, dashboards & data modelling. Able to
  create store procedures & information link to retrieving data from server and customize the data by
  using Data limiting, Filtering Schema, Document Property, Iron Python, Property control, functions.
- Proficient in My SQL for data extraction and creating the store procedures.
- Proficient in all aspects of Excel functions to analyze the data and able to generate charts & pivot table in Excel to present the detailed summary.
- Insight on statistical data and recommend customer to develop their Business with the help of analytics techniques & interactive user friendly Spotfire dashboards.
- Have experience in IPMVP Energy Savings methodology, Gas Savings, AZURE Climate Zone.
- Coordinated with end users for designing and implementation of analytics solutions as per project proposals.
- Experienced with detailed document, report preparation and complex internal & external data analysis responsibilities.
- Checked monthly reports for accuracy and initiated more efficient data collection procedures.

### **Career Recital**

### Company: EcoEnergy Insights, Carrier

**Analyst from April 2019 to Current** 

Providing CORTIX™ Building IoT platform's strong, context-based approach across multiple industries. From banks to hotels to retail chains to water utilities, renowned enterprises have trusted to transform their building operations.

For Organization details Pls visit: <a href="https://www.ecoenergyinsights.com">www.ecoenergyinsights.com</a>

Project Handle: 5 US Restaurants, 1 Singapore Restaurant, & 2 Indian Banks. (4 to 505 Stores in Each Client)

### **Operational and Asset management**

- RMS performance and Data Availability.
- Detailed Analytics on Aircon/RTU's compressor, heater (efficiency and performance).
- Analysis on RTU's schedule and set point management.
- Analytics to identify performance on Refrigeration assets like Walk in cooler, Walk in freezer and makeline. And Fryer, Ovens performance analysis.
- Analysis on Defrost Cycle and HACCP deviations.
- Identifying meter, sensor failure issues and site connection issues.
- Preventive actions and predictive measures.

### **Energy Analysis**

- Energy Consumption Profile/ Energy distribution analysis.
- Energy Trends- Service window level, Hourly, daily & enterprise level trends.
- Energy Meter accuracy, bypass/ Tampering and Overrides analysis.
- Energy Spend Analysis- YOY with ASHRAE Climate zone.
- Guest count and net sales in (\$) trend vs energy profile.
- EUI (Energy use intensity) comparison analysis.

# **Battery Management**

- Detailed analysis of battery performances on SOC (State of Charging), PSOC (Partial State of Charging), DOD (Depth of discharge), Temperature of battery maintaining, Cycles per day, charging time, Discharging time, Coup DE factor.
- Efficient analysis on Battery Backup time, BLVD (Battery low voltage disconnect), LLVD (Load low voltage disconnect).
- Plotting graph on above analysis parameters i.e. DC Volt vs SOC%, DC Volt vs current, SOC% vs temp, SOC% vs charge current, etc.
- Optimal solutions to improve battery efficiency will help to reduce the DG utilization and energy cost.
- Preventive measures on the entire battery bank by identifying a weak cell.

# **Business Analytics**

- Achieved 12% Electricity Savings which is equivalent to approx. 376Kk kWh saved & cost savings on approx. 36k \$ for 10 sites span of 15 months regulation based on IPMVP Option C method by using the linear regression model.
- Achieved 14% Gas Savings which is equivalent to approx. 690k kWh saved & cost savings on approx. 80k \$ for 205 sites span of 15 months regulation based on IPMVP Option B method.
- Savings Opportunity Analysis on avoiding overcooling in Branch level.
- RCA for low savings Branches.
- Potential savings on Aircon controlling, Voltage unbalance and Low Power Factor can be made by correcting the operations.
- Explored savings by Battery cycle management on fuel and energy cost and CO2.

### Company: Invendis Technologies (I) Pvt. Ltd

### Data Analyst from October 2015 to March 2019

Providing Remote Monitoring solution (RMS) to telecom infrastructure companies to monitor and control the tower sites remotely and project the real time information via Web based Application. Enabling proactive monitoring of tower sites and minimizes operation cost to infrastructure companies.

For Organization details Pls visit: www.invendis.com

Project Handle: 13 Telecom Clients and 3 Solar Clients in different countries (10 to 2300 Sites in Each Client)

### **Analysis on Operational and Asset management**

- Trend analysis on Site Uptime of Daily, weekly and cluster.
- Analysis on factors which affects energy i.e. Frequency out of range, Load imbalance, power factor, Phase High voltage, DG starter battery voltage and shelter Room Temperature.
- Asset Health status of ACEM, DCEM, Temperature sensor, Fuel sensor, Radiation sensor, Weather
  monitoring sensor, Remote monitoring unit, Battery management, Wireless modules, Aircon
  controller, Rectifier controller, DG controller, IP Camera and DVRS.
- Asset performances and comparison of different matrix.

### **Energy Trend Analysis**

- Energy cost vs kWh trend-Monthly, Quarterly and Yearly.
- Power source utilization profile/ Grid availability profile.
- Operator wise Site load and BTS load profile.
- Diesel consumption trend- Site level, Cluster level and circle level.
- Fuel consumption per hour vs load trend.
- Specific fuel consumption (SFC) Fuel consumption/ kWh trend.

# **Business Analytics**

- Achieved cost savings on approx. \$1 million for 500 sites span of 12 months regulation of Room temperature settings.
- Achieved cost savings on approx. \$6.6 million for 2000 sites span of 12 months regulation of Load Imbalance.
- Potential savings on Fuel refilling, Fuel pilferage, load imbalance and Temperature settings can be made by correcting the operations.

### **Solar Analysis**

- Analysis on Solar plant uptime of daily basis- Site level, cluster level and customer level.
- Performance of solar plant analysis on expected energy, Radiation, performance ratio (PR %).
- Analysis on plant equipment's i.e. Inverter, MFM, Radiation sensor, etc.
- Root cause analysis on inefficient solar plant.
- Analysis on ROI (Return on investment).

# Company: Signals and Systems (I) Pvt. Ltd

Data Analyst from March 2015 to September 2015

Signals and systems offer technological and innovative solutions addressing the problems, are a gap between Peak demand and installed capacity and high level of technical and commercial losses. Providing the end-to-end solutions including products, training, and services.

For Organization details Pls visit: www.sandsindia.com

Project Handle: 2 Indian Clients (250 to 3000 Site in Each Client)

# Responsibilities

Preparing Report for Energy Consumption, Energy Loss and Energy Billing. Taking precaution to maintain the efficiency, online real time energy monitoring and audit to clients.

### **Billing Integration**

In most of the utilities, the meters are read manually, and the billing data keyed into the billing software manually. This is prone to errors resulting in loss of revenue.

#### **Meter Data Analysis**

The data retrieved from the meter has wealth of information and if monitored regularly, can benefit both the utility and the consumer. The wide range of services includes monitoring of revenue parameters like CT reversal, event analysis, demand violations etc. Besides, Power Quality parameter like low power factor is also monitored.

# **Types of Energy Meters Known**

L&T, Secure, Hpl Socomec, Genus and Dlms.

### **Software Products**

L&T Vinplus, Vincom, Secure Smart 2000, Genus-URJA, MACS 2009 Professional, CDF Generation Software Billing Support Software EMARS Report Generation Software.

# **Operating System**

Windows.

# **Scholastics**

- BE Electrical and Electronics Engineering from Shivani Engineering College Trichy, in 2014. Secured first class with 7.5 CGPA.
- Diploma Electrical and Electronics Engineering from Shivani Polytechnic College Trichy, in 2011- with 90%.
- Xth at E.R. Higher Secondary School, Trichy in 2008 -with 84%.

# **Personal Dossier**

Address: No 13 Patel Layout, Begur, Bangalore- 560068.

**Date of Birth:** 19<sup>th</sup> February 1993. **Languages Known:** Tamil and English.

**Hobbies:** Listening Music, Gardening.