ASHRAY UDAYA SHANKAR

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SUMMARY

A passionate problem solver with about 6 years of experience in analytical studies and project management in the energy domain

EXPERIENCE

Indian Institute of Science, India – CGPL, ICER   Jan 2021 – Present
Project Management Associate
Involved in leading the project management of the IOCL project on process testing & optimization of Biomass gasification system coupled with a vacuum pressure swing adsorption gas separation system to obtain high purity ISO grade hydrogen for fuel cell applications.

Klaus IT, India (Client: Robert Bosch Engineering and Business Solutions)   August 2019 – Jan 2020
Market Analyst – Data science
Based on the requirements of the marketing team to devise a forecasting methodology to identify the futuristic B2B sales scenarios in order to facilitate their production planning and marketing strategies, I worked with sales and other macro-economic data (about 25-30 variables) for passenger cars and commercial vehicle segments right from the initial stages of data extraction, data cleaning and modelling using time series forecasting methods

Indian Institute of Science, India – Department of Management Studies   Feb 2019 – June 2019
Project Associate
In order to facilitate better planning of electricity demand in Karnataka (based on months, weeks, and seasons), data of the daily electricity demand curves were extracted from KPTCL and other sources, cleaned, categorised and soft clustering technique (Fuzzy C means clustering) was applied to arrive at the representative load curve for each category, the results were validated with load curves derived from Linear discriminant analysis. Datasets for energy usage of various residential buildings were extracted based on experimentation, cleaned and a multiple linear regression model was applied to predict and optimise the usage based on surface area, wall area, roof area, building height, orientation and other factors.

Center for Study of Science, Technology and Policy, India   Sep 2017 - Feb 2019
Research Engineer
Analysed and identified the key impact trends in financial, environmental, social and biomass resource data to arrive at the roadmap for bringing in the Shell's IH2 technology into the Indian market , Developed an excel based techno economic model for roof top photovoltaic systems based on local BESCOM policies, analysed the economic feasibility of net metering and gross metering schemes based on NPV, IRR and LCOE data obtained, suggested improvements to the existing policies, Dash board Reporting of the data related to capacity, generation, prices, Renewable energy certificate, and renewable purchase obligation for various renewable energy sources for the development of a renewable data portal platform

Trina Solar, China   Sep 2016 - Jul 2017
Systems Research Engineer
Simulation and Analysis of the system performance, ARIMA time series modelling on the minute-wise energy data to forecast the futuristic scenarios of energy production to help optimize operation and maintenance of the plant, Developed a techno-economic model for utility-ground station using VBA ,Designed an experiment and performed data driven statistical modelling of energy production in bifacial modules at various locations, tried and test various clustering methods to arrive at the best possible choice of the inverter for each segment, suggested segment-wise product solution for the Indian PV market

ETA Florence Renewable Energies, Italy   Feb 2016 – Aug 2016
Technical Support Engineer
Extracted and visualised various energy and project management related databases and reported them using dash boards for the development of marketing materials related to European Biomass Conference and Exhibition, 2016 at Amsterdam

PROJECT THESIS

Master thesis: "Investigation of Ternary Organic Solar Cells Using Steady State Pump Probe Spectroscopy", I-MEET, FAU-Erlangen, Germany under the guidance of Prof Christoph J Brabec
Bachelor thesis: "Combustion Instability Analysis of Solid Rocket Motors Using T shaped burner", CGPL, IISC, Bangalore under the guidance of Prof.P J Paul

SKILLS & CERTIFICATIONS

Skills: Project Management, design of experiments, Development of analytical assessment frameworks, data analysis, modelling
Tools: Advanced Excel, VBA, Matlab, PVSyst, R, Python
Certifications: Analytics 360 plus, Analytics Training Institute, Bangalore, PV system design and analysis, Solar Energy International, USA
Awards: Bavarian scholarship for master thesis, FAU Erlangen, Germany, Arvin Meritor scholarship for academic excellence, RV college of Engineering, Bangalore
Languages Known: English, German (A2), Hindi, Kannada

PUBLICATIONS

Conference Paper Titled – "The Response of Fibre Metal Laminate Panels Subjected to Impact Loading" at the two-day National Conference on Advanced Forming Technologies sponsored by Naval Research Board and Tumkur University held at RVCE during 2010.

HOBBIES

A Youtuber with a passion for Composing, performing music and song writing
Link to the channel: https://www.youtube.com/channel/UCxv1mmCzGdwcp2A8O63TG9Q

EDUCATION

Friedrich Alexander Universitat, Erlangen, Germany (2.3 GPA)   Sep 2012– Apr 2015
Master of Science in Computational Engineering
RV College of Engineering, Bangalore, India (9.54 CGPA)   Sep 2007–Jun 2011
Bachelor of Engineering in Mechanical Engineering