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ngjiasheng94@gmail.com

📞
+(65) 98151091

in
linkedin.com/in/jia-sheng-ng

PROJECT ACHIEVEMENTS

Data-Driven Energy Efficiency Solution Mar 2022

- ▣ Successfully developed and deployed Machine Learning Model for the prediction of Solar Thermal Output for an International Academy in Singapore
- ▣ Weather Normalized ML Models report R2 value >0.98, as well as other outstanding Maths Kpi

SGX Centre 1 and 2: Design & Build Chilled Water Plant Systems May 2021

- ▣ Achieved Annual Energy savings of 5,069,022 kWh
- ▣ Led Cross-Functional Teams to Reduce 27% of Total Building Energy Consumption
- ▣ SGX Centre awarded BCA Green Mark Platinum

SKILLS

Data Analysis & Visualization

Project Management

Energy Management System

Energy Audits

Predictive Analysis

Computing Languages:
PostgreSQL, Python,
Excel VBA, Axon

Ng Jia Sheng

Senior Engineer / Data Scientist (Energy Management)

Self-directed engineer & thriving analyst with proven ability in developing algorithm to optimize energy usage in commercial/industrial buildings. Strong ability to clearly communicate project scope, goals, and deliverables to ensure that team members are on the same page and working in accordance with the company's strategy and commitments to innovate new products.

WORK EXPERIENCE

Teale Pte Ltd (Jun 2021 - Current)

Senior Engineer / Data Scientist

- ▣ **Energy Monitoring System:** Led the research, design and deployment of energy information systems with machine learning models and algorithms capabilities, allowing forecasted energy demand and deviations from trained models to be analyzed in near real-time for automatic insights and remedial measures, Sandbox version of demo solution presented to IMDA officer, pending grant of ~SGD\$62,000.
- ▣ **Effective Communicator:** Oversaw the development of energy monitoring systems from concept to execution, managing cross-functional team and stakeholder interactions.
- ▣ **Data Analysis:** Perform visual and statistical analysis of energy data for efficiency opportunities leading to an average energy savings of 10% for both commercial and industrial facilities with Axon, Python, and its associated libraries.
- ▣ **Visualization Interface:** Prioritized feature requests and built customizable dashboards to track KPIs (kWh savings/carbon emission reduction) that fulfill customer objectives while staying within project budget. ~15 unique dashboards for data visualization were designed (with iterations) which reduced manual reporting work by 4 hours weekly.
- ▣ **Market Research:** Conduct market research, user feedback, and consumer expectations, and share findings with management and stakeholders to support corporate decision making.

Comfort Management Pte Ltd (Jun 2019 - Jun2021)

Energy Engineer

- ▣ **Energy Optimization:** Identified, proposed, and implemented Energy Conservation Measures that bring the best value to clients. Completed projects have achieved substantial energy savings and awarded high Green Mark Ratings (Gold Plus to Platinum Ratings).
- ▣ **Project Management:** Involved in multiple projects simultaneously (Ranging from \$230k - \$5.3M) and oversaw the execution of works by sub-contractors to meet project objectives and datelines.
- ▣ **Confident Presenter:** Delivered project proposals and presented opportunities to new and existing clients to secure various sustainability scope of work.
- ▣ **Algorithm Development:** Successfully developed and implemented an algorithm-based software program with Excel VBA, Google Script, and Telegram to automate daily chiller plant performance calculations across multiple sites (> 5), generating daily ACMV performance reports and notifications for end-users. Significantly improved the time taken to perform data analytics, improving the data visualization and eliminating human errors.
- ▣ **Community:** Hosted BCA's dialogue sessions with ~150 final year students from local universities to discuss the importance for industry change in order to reduce energy usage and carbon emissions.

EDUCATION

General Assembly Singapore (Data Science Immersive)

Nov 2021 - Jun 2022

- ▣ Project's documentation and further information may be found in my portfolio at: <https://github.com/Jiasheng30/General-Assembly-Projects>

National University of Singapore

Bachelor of Engineering (Hons.), Mechanical Engineering (First Class Honours)

Aug 2016 - Jun 2019

- ▣ Awarded the BCA-Industry iBuildSG Scholarship by Building Construction Authority for outstanding academics and CCA contribution.

CERTIFICATES

- ▣ BCA Green Mark Accredited Professional (GMAP) Singapore Certified
- ▣ Energy Manager Course (SCEM) [Ongoing 5/6 modules completed]
- Professional Certification expected on Sept 2022