NAVEEN PANDITHARATNE

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EDUCATION

University of Wisconsin - Whitewater **May 2024**
Master's, Computer Science

University of Hong Kong **December 2020**
Bachelor's, Mechanical Engineering

PROFESSIONAL EXPERIENCE

American Solar Energy Society **Remote**
Data Analyst Intern *January 2025 - Present*
- Analyze membership, webinar, and event data using Excel and Power BI to identify engagement trends and inform data-driven strategies for renewable energy programs.
- Collaborate with technical teams to cleanse and manage datasets, generate insightful visualizations and reports, supporting initiatives in solar energy and grid modernization.

Community Dreams Foundation **Remote**
Volunteer Data Engineer *November 2024 - Present*
- Developed and optimized Azure-based data pipelines using ETL workflows for the Green Connect App, ensuring scalable and efficient data processing.
- Contributed to data modeling and documentation, enhancing system interoperability and team collaboration for an environmentally focused application.

UW Whitewater **Whitewater, WI, USA**
Graduate Assistant *September 2022 - May 2024*
- Analyzed Google Ads and Facebook Ads performance metrics, creating Power BI dashboards to track key marketing KPIs and drive data-driven campaign optimizations.
- Maintained and updated campus web content, analyzing user engagement data to optimize accessibility and user experience.

Lalan Group **Sri Lanka**
Mechanical Engineer *May 2021 - November 2021*
- Monitored and analyzed energy consumption data for a 16Mkcal/hr centralized thermic fluid heater, identifying key strategies for improving energy efficiency.
- Designed and optimized utility networks (water, compressed air) using AutoCAD, contributing to reduced operational inefficiencies.
- Managed machinery commissioning projects using MS Project, tracking progress and optimizing resource allocation based on project data.

Vidullanka PLC **Sri Lanka**
Engineering Intern *February 2021 - April 2021*
- Developed a Python-based SARIMA forecasting model to predict energy consumption trends for biomass and hydropower projects, improving forecast accuracy.
- Conducted historical load pattern analysis to enable proactive energy management strategies and reduce operational waste.

PROJECTS & OUTSIDE EXPERIENCE

Building Smart Meter Forecasting and Analytics
- Engineered an end-to-end ML pipeline that processes 27.6M hourly electricity readings from 1,572 buildings, applying temporal feature engineering and time zone conversion to achieve 30.4 MAE in consumption forecasting.
- Created interactive geospatial visualizations with clustering and season-specific energy profiles, identifying consumption patterns across different building types and enabling stakeholders to optimize energy usage.
- *Link to project*

Capstone - Physics-Informed Neural Network for Fluid Mechanics **Wisconsin, USA**
September 2023 - May 2024
- Implemented a PINN to simulate the Lid-Driven Cavity flow problem, integrating fluid mechanics principles with machine learning.
- Compared the model's performance against ANSYS simulation, achieving higher prediction accuracy using advanced optimization techniques such as L-BFGS.

SKILLS

Skills: Python, Java, SQL, HTML/CSS, R, JavaScript, Arduino, React, Node.js, MongoDB, Git, Power BI, AutoCAD, SolidWorks, Adobe Creative Suite