Novan Zakkia

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AutoCAD | Solid works | Power Systems | Quality Control | Systems Management | Control Engineering |System Integration| MATLAB| PLC | Software Development (C, C++, Java, Python) |FPGA/HDL Design| Digital Design

Electrical Engineer / Electrical Power Engineer

Education:

Cornell University, Cornell Tech, New York, NY **Aug 2021 - Present**

- Master of Engineering in Electrical and Computer Engineering
- **Awards:** Received a full ride scholarship for complete duration of study
- **Relevant Coursework:** ML, Applied Digital Signal Processing /Communications, Data Science, Product Management

Bandung Institute of Technology, Bandung, Indonesia **Aug 2012 - Jul 2016**

- Bachelor of Science in Electrical Power Engineering
- **Relevant Coursework:** Power System Analysis, Power Electronics, Electrical Machines, Signal and Systems
- **Thesis:** Hysteresis current controller for three phase grid-connected inverter

Technical skills:

- **Power Engineering & Electronics:** ETAP, PSS Sincal, PSIM, Altium Designer, Quartus**,** OrCAD, PSpice, Altium, Quartus-II, MS-office, PCB Design with Eagle, Soldering, Lab View, FPGA, SQL, MATLAB/Simulink, VHDL and Verilog Programming**.**
- **ML & Data Science:** Python, Jupyter Notebook, SQL, TensorFlow, PyTorch, Visual Studio Code.

Work Experience

Project Manager **Jan 2020- Jul 2021**
Siemens Energy, Indonesia

- Led 5 projects worth $1.5M of power distribution and automation system upgrades for pulp & paper and O&G industries.
- Successfully maintained projects' gross margin (GM) within the planned level of 10 – 15% as per project performance targets.
- Kept projects' non-conformance-costs (NCC/ unwanted costs) below 3% as per the project performance targets.

Electrical Power Engineer **Dec 2018 - Dec 2019**
Siemens Energy, Indonesia

- Conducted power system studies to evaluate various industrial plants under normal operation & different abnormal scenarios.
- Developed system designs, conducted Factory Acceptance Test (FAT), supervised installation & commissioning of the projects.
- Performed installation supervision & commissioning of LV & MV switchgears, transformers, motors, VFDs, PLCs, and SCADA for power automation solutions.

ASEAN Engineering Graduate Program **Mar 2017 - Dec 2018**
Siemens Energy, Indonesia & Germany

- Rotated across different functions (Engineering, Project Management/ PM, and Proposal) over one and a half years.
- Did a six-month abroad assignment in Erlangen, Germany, supporting global projects of power, drives, automation systems.

Academic Projects

Image Segmentation and Object Tagging for Self-Driving Vehicles **Aug 2021 - Present**

- Currently developing a robust & accurate instance-level labeling of objects within an image in the context of autonomous driving
- Software used: Jupyter Notebook, Tensorflow, PyTorch; Relevant fields: Machine Learning

Energy Disaggregation of Equipment for Commercial Buildings **Aug 2021 - Present**

- Currently developing a solution to disaggregate equipment's energy use to reduce inefficiencies in commercial buildings
- Relevant fields: Internet of Things (IoT), Data Science, Energy-as-a-Service (EaaS); Company advisor: OnPeak Energy

Hysteresis Current Controller for Three Phase Grid Connected Inverter **2015 - 2016**

- Designed and implemented a grid-connected inverter with an improved Hysteresis current control method
- Hardware and software used: PSIM, Altera Quartus, Altium Designer, FPGA

Volunteering

AI Education Camp Program (organized by Cornell Tech & MIT) **Nov 2021 - Present**

- Volunteered as mentor to help middle school students learn AI, especially those from groups underrepresented in tech
- Program features: theoretical, hands-on, and computer-based activities on AI concepts, ethical issues, and applications

Study Abroad & Scholarship Mentoring (organized by Pemimpin.ID & SelfDev, Indonesia) **Apr 2021 - May 2021**

- Volunteered as mentor to help undergraduate students prepare their college & scholarship applications

Certification/ Publications

A hysteresis current controller for grid-connected inverter with reduced losses (Link) **2016**

- 2nd International Conference of Industrial, Mechanical, Electrical, and Chemical Engineering **(ICIMECE 2016)**