

PRAJAKTTA VINOD DONGRE

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TECHNICAL KNOWLEDGE

Technical Software/Tools:	ETAP (Self Learned), PLC- Siemens, MATLAB, AutoCAD Electrical (Self Learned), PSIM, VISIO, HOMER Energy, RETScreen, DECK, MS Office (Word, Excel, PowerPoint, Outlook)
Programming Languages:	Ladder Logic, PLC programming
Operating System:	Windows
Communication Protocols:	Profibus DP, Ethernet/IP, Modbus, TCP/IP

EDUCATION

Concordia University, Montreal, Canada	Sept 2018 - April 2020
Master of Electrical and Computer Engineering	CGPA- 3.61/4.3
Majors - Electrical Power Systems and Control System Engineering	
S. B. Jain Institute of Technology, Management and Research, India	June 2013 – July 2017
Bachelor of Engineering	CGPA- 8.4/10
Major - Electrical Engineering	

EXPERIENCE

Graduate Trainee - Mauda Super Thermal Power Station, Nagpur, India	Nov 2017- Feb 2018
<ul style="list-style-type: none">Worked with the Operation & Maintenance Department to monitor, control & troubleshoot 2 units of 500 MW power stations each.Performed Instrument Calibration and PID tuning. Expert at establishing connection of PLC with SCADA.Assisted in programming, testing, and troubleshooting of PLC systems.Hands-on experience in reading electrical drawings, preparing single line diagram, wiring diagrams. Working knowledge of generators, transformers, switchgear, motors.	
Intern - Cabinet Systems & Controls Pvt Ltd, Pune, India	Aug 2017- Sept 2017
<ul style="list-style-type: none">Learned to prepare billing of material (BOM) for Electrical & Automation components, P&ID study, Automation Layout.Assisted in the simulation test of all the items manufactured.Preparation of documents required for equipment installation.	
Summer Internship – Khaperkheda Thermal Power Station, India	June 2016- July 2016
<ul style="list-style-type: none">Understood working of various units such as coal handling plant, ash handling plant, water treatment plant, boiler.In-depth knowledge of Automation (PLC).Hands-on experience on a wide range of Instrumentation and Control systems.Technical knowledge of power system modeling and analysis, faults occurring while transmitting the power, cable sizing, lightning and surges, grounding techniques, and switchgear.	

PROJECTS

Harmonic compensation using Three-Level Inverter, Team of 2

Fall 2019

Tool: MATLAB

- LC filter was introduced in the input side of the inverter (at PCC) to reduce the distortions. Filter calculations were performed. FFT analysis and THD results with and without filters were observed in MATLAB.
- The designed filter was able to reduce the harmonics.

Control of Ozone Generation System, Team of 2

Summer 2019

Tool: MATLAB

- Designed a local controller for the plant using supervisory control theory and **DECK scripts (M-files)**.
- The Local Controller supervised the ozone generation system and ensured that the start-up and shutdown procedures were followed. It also ensured that the safety of the system is not compromised by making sure that the ozone generator is purged during the shutdown process thus meeting the design specifications.

Design of Photovoltaic (PV) System for a house

Winter 2019

Tools: HOMER Energy, RETScreen, AutoCAD

- Collected location data using HOMER Energy, performed load and panel calculation along with solar panel orientation angle. This helped in the selection of charge controller, battery, inverter, and cables.
- Using AutoCAD wiring diagram was drawn. PV system was able to meet the load requirements of the house.
- Developed knowledge of **renewable power and energy storage system**.

Simulation and Analysis of Multiple port DC/DC Converter for Hybrid Electric Vehicles, Team of 2

Winter 2019

Tool: PSIM

- Multi-port DC/DC converter was used to interface the PV source, battery, and ultra-capacitor. Steady-state analysis was carried out.
- The converter increased the reliability of the vehicle in case of failure of any source, maintaining a continuous power supply to the load. This was observed in the PSIM results.

ACHIEVEMENTS

- Organized a one-day seminar on “**POWER PLANT FAMILIARIZATION**” conducted by NATIONAL POWER TRAINING INSTITUTE - ISO 9001: 2000 & ISO 14001:2004 Organisation, Ministry of Power, Govt. of India.
- **Certificate of Excellence** - 16th rank holder in Bachelors- RTM Nagpur University
- **Certificate of Excellence** - Runner up in Technical Paper Presentation Competition
- **Perfect Attendance Certificate** - Academic year 2013-14
- **Discipline and Event Organiser Head** of Department - 2014-17

LANGUAGES

- English – Fluent
- French – Beginner
- Hindi – Native
- Marathi - Native

INTERESTS and ACTIVITIES

- I like listening to music.
- I also enjoy skating and swimming.