

# Zohaib Ilyas

*Electrical Engineer*

## Work Experience

### Research Assistant

Feb. 2017 – Present

#### Power Systems Research LAB (PRL)

Power Systems Research LAB (PRL) is a research lab in NUST-PNEC whose objective is to provide solutions to the problems of the existing Power System.

#### Achievements

- Researched on FACTS Devices and proposed a model of Transformer-less Unified Power Flow Controller.
- Designed and Fabricated hardware for PRL's first ever Cascaded Multilevel Inverter.
- UG Head of Junior's Final Year Project of Synchronization of Three Phase Cascaded Multilevel Inverters with Grid using Droop Controllers.

#### Major Responsibilities

- Hardware Development Head
- Procurement, Manufacturing and Sales Head
- Project Accounts, Logistics & Marketing Lead

### Intern Projects

02 July – 31 July, 2018

#### GETZ Pharma Pvt. Ltd

GPPL is the largest branded generic pharmaceutical company in Pakistan, for increasing its production ASTOLA Project of GETZ Pharma is in pipeline having an estimated load of 12MW, for this 132KV/11KV GIS Grid Station, and 11KV/0.4KV Substation has been Installed and ready for commissioning.

#### Responsibilities

- Study the Electrical Network of GPPL Head Office and ASTOLA, and done PowerWorld Simulations of both.
- Learned the operation of MV, LV, PCC and MCC Panels at GPPL.
- Monitored the proper Installation of MV, LV, PCC, MCC Panels, DBs and Cables at ASTOLA.
- Inspection and Testing of PCC Panels during FAT and at Site as well.
- Learned the Complete Earthing of Plants.
- Recommended some Quality related improvements and changes which will helpful in safe and efficient Operation.

### Intern Operations

01 Jan – 15 Jan, 2018


#### Aquagen Pvt. Ltd

Aquagen Pvt. Ltd had installed a Power Plant in Karsaz Karachi, which has 6 operational Jenbacher 320 gas engines with 1MVA of Alternators each, picking-up a Load of 3 Naval Units and 02 SREs.

#### Responsibilities

- Study the complete Electrical Network of Plant.
- Monitoring and Data Collection from Control Panels, Energy meters for load analysis.

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Karachi, Pakistan

## Education

### **B.E (Electrical)**

Aug 2014 – May 2018

National University of Sciences and Technology (NUST)

Campus: Pakistan Navy Engineering College (PNEC)

CGPA: 3.28 / 4.00

## Projects

- Transformer-less Unified Power Flow Controller.
- 11 level Cascaded Multilevel Inverter having THD of 6.5% (without any filter).
- PowerWorld Simulations of ASTOLA and GPPL.
- Complete PV System Installation.
- Alternator and AC Motor.
- Step UP Cycloconverter using midpoint configuration.
- H-Bridge Inverter using IRF540 MOSFETS with Driver TLP250.
- Obstacle Avoiding Robot Car using HC-SR04 and HC-05.

## Skills

- Electrical Installation
- Project Management
- Critical Thinking & Problem Solving
- Circuit Designing, Simulation & Testing
- PCB Designing, Printing, Etching & Soldering
- Data Analysis

## Software Skills

- PowerWorld Simulator
- KiCAD & Proteus
- Multisim
- Matlab (Simulink)
- Microsoft Office

## Leadership Roles

- UG Head of a group for implementation of Three Phase Cascaded Multilevel Inverter and Synchronization with Grid as their FYP.
- As Founder and President of NUST PNEC Music Club lead a team of individuals for giving musical performances and for organizing musical events within the University.

## Co Curricular Activities

- NUST Representative in a Lecture by Dr. Umar Saif on How Technology can Transform Government at KSBL.
- Attended lecture on Problem Solving Skills by Victor Goldschmidt from Purdue University.
- Attended PCB Designing workshop by IEEE PNEC.
- Music Head of Farewell Night – PNEC 2016.
- Participated in Karachi Youth Festival 2016.
- Participated in GEEKS 2018 at Bahria University.
- Semi finalist of FICS NUST 2018.
- Qualified for Second Stage in NI GSD Musabaka 2017.
- Chief Organizer NUST-PNEC Olympiad 2015, 2016, 2018.
- Core Organizer of Alumni Home Coming 2016.
- Core Organizer 31<sup>ST</sup> IEEEEP All Pakistan Student's Seminar.
- Donated Blood to Indus Hospital twice.
- Part of NEED Initiative | Support A Scholar.
- Member of First Hand Foundation - FHF.
- Volunteered for many Religious Festivals.
- Football player in school and college team.