KUMAR S. GADEKAR
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Result-driven professional with a verifiable track record targeting assignments in **Electrical Design Engineering** in **Multiple Industries**
Location Preference: **Pan India**

PROFILE SUMMARY

- **Achievement-driven professional** with an experience of **3 years in the field of Control & Power Systems**
- Monitoring and executing projects with respect to budgeted cost, demand forecasts & time over run to ensure timely execution of the power transmission
- Performed power system calculation study for various ongoing projects using PSCAD EMTDC software and dynamic analysis of a single 400 kV cable tie with SVC and STATCOM in PSCAD
- Actively participated in improving the power and electrical to bring greater cost efficiency levels & energy / power reductions with extensive knowledge and exposure in Electrical Drives & Power Systems
- An effective communicator & team leader with strong analytical, problem-solving & organizational capabilities with strong documentation and writing skills

SKILL SET

~ Designing and Testing
~ Operation & Maintenance
~ Configuration
~ Dynamic analysis
~ Power System Studies
~ Electrical Design Calculations
~ Modeling & Simulation
~ Detailed Modelling of various control Systems

ORGANISATIONAL EXPERIENCE

Electrical Engineer, ETAP Automation Pvt. Ltd., Mumbai **Oct'14-Till Now**
Growth Path
Key Result Areas:

- Designing & Calculation:
  - The electrical transmission & distribution systems, managing the sizing of electrical equipment, earthing & Lighting layouts and equipment layouts
  - Of LCL Filter & sizing of DC link capacitor and 2-quadrant DC-AC conversion using VSC as per IEEE-1547
- Working in coordination with the contractors as per electrical design specifications
- Preparing proposal & man hour rate as per scope of work preparation of switching transient study report
- Simulation & Modeling of generic solar photovoltaic system dynamic model using PSCAD EMTDC software based on NREL & WECC guidelines
- Supervising the preparation of various electrical design calculations and detailed modeling of a 100-kW grid-connected PV Array via a DC-DC boost converter and a three phase three level voltage source converter (VSC)
- Performing the generic solar photovoltaic system dynamic simulation using NREL & WECC guidelines
- Comparing electrical drives (LCI, active front VSI, VFD system using diode rectifier) for generator sub-synchronous torsional interactions
- Testing & validating of type AC6C excitation system with IEEE 421.5-2016 model
- Design & operation of a SCR based soft starter for a grid connected polyphase induction motor to limit the starting currents

Highlights:

- Evaluated methods of statistical switching of the breaker approach for the LTA for EPCI of Offshore Facilities project as well as facilitated improvements in project work
- Initiated successful development and implementation of Power factor correction using fuzzy logic mechanism related to closed loop system in MATLAB Simulink along with design selection, electrical power calculations & quality control activities
- Developed the charge & discharge circuit for battery model validation & configuring the battery controller based on its State of Charge (SOC)
- Successfully implemented different arc models for arc circuit interaction studies in PSCAD & compared with MATLAB arc model blockset & XTrans software program

INTERNSHIP

Schneider Electric India Pvt. Ltd., Bengaluru **Nov'13 – May'14**

Key Learning:

- Worked in the field of power monitoring and developed power factor control algorithms which are implemented in PFC controllers

NATIONAL LEVEL WORSHOPS ATTENDED

- National:
  - Workshop on power quality (monitoring, standards & mitigation techniques)
  - Franchisee training program by MSEDCL
- Danfoss India sponsored one day workshop on electrical drives
- Attended training course on modeling & simulation of power system stabilizers" at IIT Mumbai
- Attended Introductory training Course on EMI/EMC at IIT Bombay by Prof. Vivek Agarwal

EXTRACURRICULAR ACTIVITIES

- Certificate of national level technical symposium in PICT, Pune
- Training on switchgear in L & T"s switchgear training center, Pune
- Presented the papers in 5th & 6th International Science Engineering & Technology (SET) Conference

ACADEMIC ACHIEVEMENTS

- Technical Quiz in "Engineering Today" of AISSMS COE, Pune **(1st Prize)**
- National Level:
  - Technical event "Throttle" in Jawaharlal Nehru COE, Aurangabad **(3rd Prize)**
  - Paper on Nanotechnology: Principles & Applications" Presented at IEEE Students awareness program
- **14th** Rank in VIT Masters Entrance Examination 2012

IT SKILLS

Simulation Packages:	MATLAB 7.1 Simulink, PSIM 9.0, PSCAD 4.5.3, ETAP 12.6, AutoCAD 2008, Cadence Schematic Capture
Computer Applications:	MS Windows / Office Suite 2007

ACADEMIC DETAILS

- M.Tech. (Power Electronics & Drives) from Vellore Institute of Technology, VIT University, Vellore in 2014 with 8.43 CGPA (A Grade)
- B.E. (Electrical) from K.K.Wagh College of Engineering, Nashik, Pune in 2011 with 69.73 (First Class with Distinction)

PERSONAL DETAILS

Date of Birth:	27th June 1990
Languages Known:	English, Hindi and Marathi
Address:	4/66, Artillery Centre Road, Behind Anuradha Talkies, Nasik Road, Nasik, 422101, Maharashtra

(Refer to Annexure for Industrial and Academic Projects)

Annexure

INDUSTRIAL PROJECTS

Title: Power System Study for Nasr Full Field Development Project
Location: Arabian Gulf UAE
Client: National Petroleum Construction Company, Abu Dhabi
End Client: Abu Dhabi Marine Operating Company, Abu Dhabi
Contribution:

- Switching transient study using PSCAD EMTDC
- Preparing switching transient study report

Title: DAS – AL NASR - USSC Interlink PROJECT operated by Abu Dhabi Marine Operation Company (ADMA-OPCO)
Location: Arabian Gulf UAE
Client: Hyundai Heavy Industries Ltd.
End Client: Abu Dhabi Marine Operating Company, Abu Dhabi
Contribution: Switching transient study using PSCAD EMTDC

Title: Switching transient overvoltage & Ferroresonance study using PSCAD V4.5.3 software for the Berri, Marjan, Zuluf & Safaniya and the associate well head platforms of Saudi Arabian Oil Company (Saudi Aramco) for LTA for EPCI of Offshore Facilities Project
Location: Arabian Gulf UAE
End Client: Saudi Arabian Oil Company (Saudi Aramco)
Contribution: Switching transient study on 115kV, 13.8kV submarine cable using PSCAD EMTDC

Title: Production support complex (PSC) of Lower Fars Heavy Oil (LFHO) development project in Kuwait
Location: Kuwait
End Client: Kuwait Oil Company
Contribution:

- Switching over voltages associated with switching of 11kV cables
- De-Energization study of Transformers by performing the calculations as per IEC standard

Title: FEED Study for Replacement of HV Switchgear in GG-II and ZWAP at ZWSC Electrical System Complex
Location: Abu Dhabi, UAE
End Client: Abu Dhabi Marine Operating Company (ADMA-OPCO)
Contribution:

- Replacement of the existing 25kA, 3 sec 11kV and 6.6kV switchgears in ZWAP and GG-II with a new higher fault rating switchgear
- Specialist study for GG-II earthing system calculation and electromagnetic switching study
- Configuration optimization study to maximize the numbers of outgoing feeders for the 11kV switchgear in ZWAP and 6.6kV switchgear in GG-II

Title: Electrical Power System of the Artificial Islands of Upper Zakum 750 project and its electrical interconnection with the existing Zakum Central Complex (ZCC)
Location: Abu Dhabi, UAE
Client: Petrofac
End Client: Abu Dhabi Marine Operating Company (ADMA-OPCO) - Abu Dhabi
Contribution:

- Transformer Energizing Study to assess the impact of energizing all critical transformers in UZ750 system during Pre-PBU scenario.
- Performed Cable Switching Study for long length 22kV and 33kV subsea cables
- Performed motor switching study for 11kV & 6.6V motors based on the motor surge impedance calculation

Title: Integration of New IREP & Existing CEMP Electrical System
Location: Kochi, India
End Client: BPCL - Kochi Refinery
Contribution: Transformer Energizing Studies for Main BPCL-KR Power Transformers at different operating scenarios

ACADEMIC PROJECTS

POST GRADUATE PROJECTS:

- Performance Enhancement of multilevel inverter for harmonic minimization using PWM technique
- Control of Microgrid using PID Controller
- Power Electronics System of Grid Integration of Gearless Variable Speed Wind Turbine
- Improvement of power quality & power factor of 3 phase system with inductive load using FF TCR Compensator with Fuzzy Logic Controller (Summer Internship in Schneider Electric)

UNDERGRADUATE PROJECT:

- Modeling of Supercapacitor for Performance Enhancement of Distribution Network