

## **RAKESH KAUSHIK**

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I am seeking a full-time position in an organization where I can apply my knowledge and skills, thereby adding value to the organization and helping people.

### **Professional Summary**

- **Project Manager at Fabair Cooling Solutions, Bangalore KA. [Jan 2021 – Present]**
  - Designing, planning, coordinating, staffing, and executing HVAC/VRV installation projects.
  - EC Fans operating mode, set value and control parameters: Fan motor addressing
  - Performed Heat load calculations on HAP and MS Excel.
  - Developed duct design and rough design for ADP.
  - Developing a baseline of current energy and Energy Simulation on eQuest,.
  - Identifying, quantifying, and prioritizing energy saving opportunities.
  
- **Technical Trainer (HVAC-R) at National Training Institute, Muscat Oman. [Feb 2019 – Sep 2020]**
  - Developing / up skilling professional by providing them EAL (UK) NVQ training in the field of air conditioning and refrigeration.
  - Delivered LEED Net Zero Energy cost feasibility analysis.
  
- **Consultant Faculty / Trainer for Central Air Conditioning trade at ICICI Academy for Skills, Indore M.P. [Mar 2017 – Feb 2019]**
  - Providing hands on enhanced training on installation, operation and maintenance of central air conditioning plant components like large AHUs, Chillers, water pump and on their sub components.
  - Under the CSR activity I trained humble candidates on commercial and domestic HVAC systems and placed them for their career to start in the same area of interest.
  
- **Assistant Professor at Radharaman Institute of Research and Technology, Bhopal M.P. [Feb 2016 – Mar 2017]**
  - Delivered lectures on Heat and Mass Transfer (HMT), Refrigeration and Air Conditioning (RAC) and Concepts of Engineering Design. Organized labs and projects on various topics of HMT and RAC.
  - Guided and mentor the graduate students on Green buildings and LEED ratings.
  
- **Energy Engineer (freelance) for Building Energy and Economics, USA [ June 2015 - Jan 2016]**
  - Performed energy modelling and ran the energy measures on various facilities, multi-tenant buildings and public places. Simple pay back analysis on retro-commissioning of various projects/facilities.
  
- **Sr. Construction Analyst /Facility Engineer at Verizon Terremark, Santa Clara, CA, USA [ June 2012 – May 2015]**

- Construction analyst for phase-II expansion project for a mission critical data center, under which I have worked on level-4 and level-5 commissioning on 5 new 250 tons (each) chillers, 17 new 60 tons (each) CRAHs (Computer room air handler) and 4 new 1.5 MW (each) generators with underground fuel oil system, fuel capacity of 20,000 gallons. Precisely maintained the SLA and developed the under floor static pressure control to control the VFD speed all the CRAHs.
- Developed the graphics for Phase-II central chiller plant on a BMS work station consist of 10 chillers, 3+1 primary pumps and 3+1 secondary pumps.
- Performed point to point commissioning on 75 tons CRAHs, and define the infinnet control topology for all the BMS controllers and sensors.
- Designed and developed the building monitoring workstations for temperature monitoring and alarming to page or email to operation staff for critical alerts as well as health checkup alerts on all HVAC equipment.
- Trained operations teams on how to control the environment in the data center. By giving them a crash course on air flow management, outside air temperature and humidity and inside air relative humidity.
- Presented the advantage of floor balancing in the server rooms and cold aisle space. Establishing the uniform environment across the data center and how to optimize the fan speed.
- Responsible for Building monitoring system Andover Continuum controllers and work stations, hands on experience troubleshooting the BMS programming and solving the real time issues.
- Responsible to provide technical supports on day to day operations, like on chiller plant, air flow management, CRAH efficiency analysis, plant round sheet, developing sequence of operation.
- Responsible to ensure that best practices and standards are adopted and enforced.
- Responsible to maintain the relationship between onsite contractors and local operations team with their needs and questions.
- Worked with finance team to develop operations strategies, facility operating budgets and efficient man power across the site/facility.

➤ **Energy Engineer - Intern at Building Energy Center, University of Dayton. USA [ Jan 2011 – Mar 2012]**

- Developed and researched Radiant heated floor for taller building in Dayton, OH USA.
- Developed Transys-17 model on Solar panel and does energy analysis as well as simple pay back analysis on a project for a community of 200 residential houses at Phoenix, AZ USA.
- Designed and developed skylights and lighting controls for a semi funded public library in Dayton, OH USA.
- Conducted commercial building energy audits and industrial energy audits; developed building energy models using eQUEST and MS Excel; prepared and presented energy assessment reports for clients.
- One year of experience in utility sponsored energy efficiency retrofits for residential and commercial buildings.

➤ **Graduate Teaching Assistant under Dr. Reza Kashani at University of Dayton, USA [Jan 2010 – Dec-2010]**

- Grader - Computational methods of design and Dynamic system and controls.
- Conducted lectures and exam for Computational Methods of Design (on MATLAB and SIMULINK).

➤ **Lecturer in Mechanical Engineering Dept. at All Saints' College of Technology, Bhopal MP. [Oct 2007 – Nov 2008]**

- Delivered lecture in Engineering Mechanics, Basic Mechanical Engineering and Internal combustion engines. Created, conducted and organized Lab works, represent projects on university level.
- **Internship at Bharat Heavy Electrical Limited (BHEL), Bhopal, India [summer 2006].**
  - Observe the manufacturing of Heat Exchangers, Hydro and Turbo generators.
- **Internship at National Thermal Power Corporation Sarni, MP India [summer 2005].**
  - Analyzed and worked on increasing the efficiency of power plant by optimizing the economizer, air handler, superheated tubes and excess combustion air.
- **Internship at Madhya Pradesh state electric board Sarni, MP India [summer 2004].**
  - Analyzed the working of steam turbine and generator.

## Technical Skills

|                     |           |             |           |                  |
|---------------------|-----------|-------------|-----------|------------------|
| Andover Continuum   | TRNSYS-17 | eQUEST 3-64 | RetScreen | MATLAB /SIMULINK |
| ABAQUS              | COMSOL    | AutoCAD     | MS Office | Window Vista/XP  |
| Facility Networking | C/C++     | Core JAVA   | LAN/VLAN  |                  |

## Educational Background

|                                     |   |  |
|-------------------------------------|---|--|
| <b>Master of Science (MS)</b>       | <b>Mechanical Engineering</b><br><b>University of Dayton, USA</b>             | <b>[GPA: 3.40/4.0]</b><br><b>[Jan 2009 - May 2012]</b>   |
| <b>Bachelor of Engineering (BE)</b> | <b>Mechanical Engineering</b><br><b>Rajiv Gandhi Technological University</b> | <b>[GPA: 6.8/10]</b><br><b>[August 2003 – June 2007]</b> |

## Related Course Projects

- **Zoned Heating and Cooling Systems:** Developed Transys-17 energy models of commercial buildings to examine impact of improved zonal control, on-demand ventilation, use of an economizer. Advantages of zoning and addressing the benefits of variable pitch/variable speed fans.
- **Energy Efficient Buildings:** Worked on IECC residential code comparison 2006 versus 2009, energy consumption, implementation cost and saving analysis. Designed energy systems by increasing building energy efficiency.
- **Energy Efficient Manufacturing:** Designed energy efficient industrial methods to reduce energy consumption and day lighting design.
- **Energy Conversion Systems:** Concept of Exergy and the literature survey of Solar Energy and energy conversion methods.
- **Renewable Energy Systems:** Design renewable energy systems: solar, wind, fuel cell, hydro and biomass and cost analysis.
- **Finite Element Analysis:** Analyzed and redesign of torque arm utilizing ABAQUS.
- **Noise and Vibration Control:** Designed and analyze dissipative-reactive silencer utilizing COMSOL.
- **Mechatronics:** Designed and develop a wireless network between master and slave robots utilizing Xbee- pro chips.

## Undergraduate courses

Basic Mechanical Engineering, Thermodynamics I and II, Internal Combustion Engines, Energy Conversion systems, Heat and Mass Transfer, Fluid Mechanics, Kinematics of Machine, Dynamics of Machine, Machine Design, Strength of materials, Production Process and Manufacturing Process.

## Undergraduate Projects

- Recent developments of Geothermal energy
- Power through speed breaker

## Awards and Achievements

- Train the Trainer certification EAL (UK) [2019]
- Train the Trainer certification Voltas TATA group [2018]
- DAGSI Scholarship [FALL - 2009]
- ASHARE (Student member)
- Recognition certificate in National Level Science Olympiad
- Won second prize in Technovista competition, All Saints' college of technology. (2006)
- Attended Mechanical Workshop of National Level at SGSITS, Indore.
- Attended conference on Design for Six Sigma (DFSS).
- Participated in the National conference on Power Conversion and Industrial Drives

## Personal Details

- Father's Name: Mr. Shivpal Kaushik
- Mother's Name: Mrs. Sarwati Kaushik
- Date of Birth: 25-Nov-1983
- Marriage status: Married
- Children: Two
- Languages Known: Hindi, English, Elementary Arabic and Spanish
- Address: Bangalore, KA

**\*Reference: Will be pleased to provide upon request**