

SUNIL KAPUR

(Work Sponsorship Not Required)

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EDUCATION

University of Houston, Houston, TX Master of Science in Engineering Management, GPA: 3.7/4.0	01/15 – 12/15
University of Houston, Houston, TX Master of Science in Mechanical Engineering, GPA: 3.4/4.0	08/10 – 12/12
Kurukshetra University, Haryana, India Bachelor of Technology in Mechanical Engineering (Honors), GPA: 3.5/4.0	08/06 – 07/10

SKILLS

- **Design Tools:** AutoCAD, Inventor, Pro/Engineer, ANSYS FEA, SolidWorks, Pro/II, Revit, FMEA, FLUENT, GAMBIT, Simulink
- **Management Tools:** Microsoft Office, Microsoft Access, Microsoft Project, Agile, CAPSIM, Risk Analysis, Minitab, SPSS Regression, DEA, LINDO, ERP, Data Analysis, DMAIC
- **Relevant Courses:** Computational Methods in Mechanical Design, Conduction and Radiation, Computational Fluid Dynamics, Manufacturing Systems, Computer Aided Manufacturing, Materials for Energy Storage

WORK EXPERIENCE

Department of Physics, University of Houston, Houston, TX <i>Research Assistant, Project Supported by PGS & TOTAL</i>	01/12 – 05/15
<ul style="list-style-type: none">• Implemented a new transform to obtain the first break detection in seismic signal processing with an intention to investigate new aspects of the structure of the earth and seismic exploration• Performed coding on MATLAB, Mathematica, C, C++, Python and Simulink• Developed Algorithms and performed Simulations• Reduced the noise in data using filters and increased the accuracy by 40%	
Northern Railways, New Delhi, India <i>Associate Mechanical Engineer</i>	07/08 – 03/10
<ul style="list-style-type: none">• Improved the preventive maintenance on the parts of diesel-electric locomotives such as fuel injector, turbocharger, axle, braking system and lubrication system• Periodic maintenance and calibration of testing equipment in accordance with ISO 9001 standards• Analyzed the Air conditioning and ventilation (HVAC) and Plumbing systems using REVIT at a functional underground station• Automated Processes using Simulink at a Station• Performed Operations successfully on a tunnel boring machine• Conducted maintenance of rolling stock as per maintenance charts• Organized scheduling charts and documented the completion of maintenance• Performed FMEA for critical equipment• Document all inspection and testing in QC reports	
Dedicated Freight Corridor Corp. of India (DFCCI), New Delhi, India <i>Assistant Design Engineer</i>	02/07 – 05/08
<ul style="list-style-type: none">• Analyzed and modified DFCCI drawings using AutoCAD and SolidWorks	

- Stress analysis and vibration analysis of equipment under different loadings using ANSYS (FEA)
- Managed Stakeholder requirements and assured proposed equipment meets technical and performance needs
- Improved rolling stock of Indian Railways to meet DFCCI requirements using Inventor
- Prepared dimensional and geometrical tolerances (GD&T) for parts and assemblies
- Communicated effectively between suppliers, engineering teams, and management

ACADEMIC PROJECTS

- Improving the accuracy of Automatic first break detection by spectral decomposition method using minimum uncertainty wavelets. (Publication Pending)
- Hybrid Power Transmission in Vehicles: Team Lead and designed a hybrid vehicle prototype.

VOLUNTEERING AND INTERESTS

Mathematics Tutor and Exam Proctor, CASA, University of Houston	2011 – 2012
Volunteer Teacher in TEACH INDIA Program	2009 – 2010
American Society of Mechanical Engineers	2008 – Present
Society of Exploration Geophysicists	2013 – Present