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NEERAJ RAGHURAM

Mechanical Engineer
Class of 2014
University of Waterloo

315 King Street, Unit 403, ON N2J 2Z1

SKILLS SUMMARY

- Extensive **project management** experience gained through work term projects
- Experience with **data analysis**
- Experience with **product development** and design
- Experience with **Abaqus (FEA), AutoCAD, Solidworks, UnigraphicsNX, Microsoft Excel, MathCAD**

WORK EXPERIENCE

Energy Analyst, Willis Energy, CLEAResults Toronto, September – Dec 2013
Work Term Project- "Cost Effectiveness of a Variable Frequency Drive for Motors"

- Approved energy saving incentives for businesses as per ministry regulations
- Approved $1M of incentives and 2,000 kW of demand power savings
- Developed Canadian Energy Policy reports for the management team
- Communicated with clients to help them secure incentives

Plant/Project Engineer, Petro-Canada, Suncor Energy Inc. Mississauga, Canada, January – April 2013
Work Term Project- "24" & 36" Flare Monitoring and Alarm System"

- Designed a Flare Monitoring and Alarm system
- Lead various piping and construction projects independently
- Created detail concept selection documents, cost estimates and schedules as part of Front End Engineering Documents (FEED)
- Developed knowledge of ASME B31.3 codes for process piping

Piping Engineer, WorleyParsons, Markham, Canada, May – August 2012
Work Term Project- "Stress Analysis for a Refinery Piping System"

- Prepared stress models and calculation reports for piping systems for multiple projects
- Created Technical Bid Documents for pipe fittings from different vendors
- Troubleshot logistical problems for the Material Procurement Team

Mechanical Engineering R&D Student, Promatek Research Centre, Magna International, Brampton, Canada, September – December 2011
Work Term Project - "Study to Improve Heating Rate of Aluminum Coated Steel"

- Co-developed a new Press Hardened Steel Technology for automotive applications
- Created Design Of Experiments (DOE) for testing of process parameters for improving the heating rate of Aluminum Coated Steel
- Developed a preliminary business case for the new concept
- Gained knowledge of Hot Stamping, Casting, & Aluminum Forming processes

Manufacturing Engineer, Unilever Canada., Toronto, Canada, January – April 2011
Work Term Project - "Equipment Restoration Project", "Equipment Spare Parts Stores Centralization Project"

- Independently managed equipment spare parts stocked for breakdowns and Preventive Maintenance
- Created and lead two teams to centralize and implement 5 S (organization methodology) in the Spare Parts Store to reduce inventory value and space
- Co-managed the Equipment Restoration Project
- Generated and monitored Key Performance Indicators (KPI) with SAP for equipment spare parts stores
- Lead a project to implement new guide rails on a manufacturing line to reduce changeover time between different products

Engineering Trainee, **Komatsu ltd**., Bangalore, India, May -August 2010
Work Term Report - "Design of Single Fixture for *Cloos* Welding Robot"

- Designed fixtures for robotic welding which reduced changeover time between different products
- Created engineering drawings utilizing AutoCAD for the Process Engineering team
- Carried out studies on welding distortions and different manufacturing processes for the Process Engineering team

4TH YEAR DESIGN PROJECT

Automated Weed Extractor, May 2013 – Present, University Of Waterloo (UW)

- Co-designed and built an automated weed extracting machine
- Co-developed programs for automation for Microcontrollers and Android Application
- Project is selected for case studies for 3 Mechatronics courses at UW

EDUCATION

Candidate for Bachelor of Applied Science, Mechanical Engineering, University of Waterloo, ON, Sept 2009 – May 2014

OTHER ACTIVITIES

Waterloo Engineering Endowment Fund (WEEF) Class Representative – Fall 2012 - Present

- Approving funding requests on behalf of the class

Project Team Leader, Engine Thrust Control System, Waterloo Rocketry Team (WRT) –September 2010-August 2012

- Researched and developed an engine thrust control mechanism to control the rocket's trajectory
- Machined components using a lathe machine, mill machine and drill press

Treasurer & Engineering Representative of Waterloo Space Society (WSS)- January 2010- January 2011

- Coordinated funding requests for the Space Society, approved purchases and recorded the club's financial activities
- Task included fund-raising, event organizing and recruiting new members

Volunteer, Formula SAE (Society of Automotive Engineers) Team - September 2009

- Fabricated components for an automatic gear launch system in a machine shop
- Gained hands-on experience with the lathe and drill press

AWARDS

WACE (World Association for Cooperative Education) International Student Achievement Award- November 2010

University of Waterloo President's Entrance Scholarship 2009 for academic excellence in high school.

INTERESTS

- **Sports:** Cricket, Formula 1 and Squash
- **Cooking**