**NITISH SANJAY HIRVE** **Contact: +1-206-229-8251**

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**Objective**: To build a career in clean energy for securing a sustainable future.

SUMMARY

* 1 year work experience with an energy multinational involved in EPC.
* GPA – 3.8/4.0; Proficient with Microsoft office, 7 years of use.
* Related coursework and research work in energy conversion, thermodynamics, fluid mechanics, combustion, energy audit and management, renewable energy. Ability to learn on the go.
* Graduation in March 2015. Available April 1, 2015, no sponsorship requirements for 29 months based on OPT work authorization.

TARGETED AREAS OF INTEREST

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| * Energy consultancy. | * Renewable energy | * Combined cycle power. |
| * Combustion analysis. | * Thermodynamics. | * Stirling engine. |
| * Building energy. | * HVAC. | * Power generation. |
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PROFESSIONAL WORK EXPERIENCE, PROJECTS AND RESEARCH WORK

* Executive engineer at 120 MW thermal power plant at Cuttack, India for Thermax Limited. Responsibilities in site level engineering and planning. Involved in construction of boiler, STG and BOP. Actively involved in commissioning of boiler and auxiliary system including HVAC. Completed punch list for boiler and coal handling plant. Designed the duct system for coal bunker dust extraction, under given time and resource constraints.
* Executive engineer at 50 MW thermal power plant at Hyderabad, India for Thermax Limited. Contributed to construction of boiler and coal handling plant. Commissioned entire coal handling plant and water treatment plant. Negotiated with vendors wherever there was conflict in equipment on site. Regular interaction with customer side management. Maintained and recorded documents required for IBR compliance.
* **Ongoing research project**- develop free piston Stirling engine to generate electric power from clean fuels. This involves detailed thermodynamic and dynamics modeling and analysis in Matlab to predict engine performance. Successfully manufactured first prototype. Testing under progress. The product will be developed into a CHP system.
* STS business poster competition 2015.
* Environmental Innovation challenge 2015. To present a business idea with a working prototype which will significantly impact the environment.
* Undergraduate project- develop prototype of low cost tidal turbine to develop micro scale power. The aim was to have a turbine that generates enough power to light a few bulbs in the remote areas of India which are not connected to the grid.
* As a follow up of this project which was totally experimental, the drag type turbine was analyzed using COMSOL software. This project was done as a part of the advanced fluid mechanics course at University of Washington. The analysis was slightly inaccurate due to software constraints and the project was shelved and replaced by another.
* Analysis of batch heating of small spur gears using COMSOL software. Tried different configurations in terms of location of burners/flue gas inlets and use of baffles to predict the uniformity and effectiveness of heat transfer. The mean batch temperature and standard deviation were used to measure the effectiveness and uniformity of heat transfer respectively.
* Designed and built automated robot for a competition specified task at ROBOCON 2011 competition in India.

EDUCATION AND COURSEWORK

**Current** - MS in Mechanical Engineering at **University of Washington.** **GPA – 3.8**

Relevant courses-

* Advanced energy conversion
* Mechanical engineering analysis level 1 and 2
* Advanced fluid mechanics
* Graduate thermodynamics
* Renewable energy
* Rocket propulsion
* Transit system planning
* Computational techniques in mechanical engineering

**Past** - BE in mechanical Engineering with Distinction. (Pune University, India) (2008-2012) – **GPA: 3.95**

Relevant courses completed:

* Energy audit and management
* Computational fluid dynamics (CFD)
* Numerical methods using Matlab as a platform for implementation

COMPUTATIONAL AND OTHER SKILLS

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|  | * Excellent interpersonal skills | * Use of combustion equilibrium code by CSU/NASA. |
|  | * Advanced use of Excel, MS Office. | * Proficient at working with large data |
|  | * MATLAB programming. * Organized working with a professional mindset | * Working knowledge of drawings * Sound technical and analytical writing |