

## MECHANICAL AND ENERGY ENGINEER

OBJECTIVE: SEEKING FULL-TIME POSITION



### SOFTWARE AND TECHNICAL SKILLS

- **HVAC:** Trace 700, Revit, eQUEST, EnergyPlus, Carrier HAP, CAPS
- **CAD/CAM:** PTC Creo, AutoCAD, SolidWorks, CATIA, SketchUp
- **Programming:** C, MATLAB, Fortran, ParaView
- **Others:** LaTeX, Photoshop CS6, MS Office

### PROFESSIONAL EXPERIENCE

- **HVAC and Energy Modeling Intern, (Feb 2016 — April 2016):** Freese and Nichols, Inc. (Fort Worth, TX)
  - Building heat load calculations and energy modeling using load simulation software (Trace 700)
  - Design and layout of mechanical systems for facilities
  - Site visits to conduct facility assessment and collect system information
  - Perform energy saving calculations to determine savings, cost and payback
  - Duct sizing and air flow balancing design
  - COMcheck report
- **Research Assistant, (Sep 2013 — Dec 2015):** University of North Texas MEE Department (Denton, TX)
  - Energy simulation and optimization: Redesigning Zero Energy Lab (ZØE) building in SketchUp and Energy Plus and simulating energy consumption. for different plans to economize energy usage on HVAC schedules
  - HVAC Energy consumption analysis for different conditioning programs and seasons
  - Integration of different renewable energy resources (Geothermal, wind, solar) with HVAC system
  - Human thermal comfort and human behavior analyzing to link with HVAC system temperature control
  - Research on radiant cooling and heating efficient and comparing with other common types conditioning
  - Experienced with BMS controls like TAC Vista
  - Conducting tours and training students with principles of renewable technologies
  - Master's thesis research on "Dynamic temperature control for HVAC systems based on the instant occupants' thermal comfort level"
- **Fuel cell Researches Intern, (Oct 2011 — Dec 2012):** Renewable Energy Organization of Iran (Tehran, IR)
  - Characterizing FC types and Utilizing for different facilities based on the capacity, usage pattern and charging time
- **Intern at Pumping Station, (Jun 2011 — Oct 2011):** Tehran Oil Refineries (Tehran, IR)
  - Test of Choke Valves, Oil Skimmer Machine and oil treatment, plant commissioning and pipeline cleaning pigging
  - Analyzing the major processes and components such as pumps, valves, compressors, turbines and hydraulic controls

### EDUCATION

#### Masters, Mechanical and Energy Engineering

September 2013 – June 2016 – University of North Texas, (Denton, TX)

Concentration: Energy audit – HVAC design and commissioning – Renewable energy integration

#### Bachelors, Mechanical Engineering

September 2006 – June 2010 – University of Azad, (Tehran, IR)

Concentration: Heat and Fluids – Renewable Energies (Fuel cell)

### RELEVANT COURSES

- **Masters:** Principles of HVAC, Fundamentals of Energy, Alternative Energy Resources, Air Pollution Control, Advance Thermodynamic, Computational Fluid Dynamics (CFD), Nanoscale Energy Transport, Continuum Mechanic
- **Bachelors:** Central Heating & Air Conditioning, Refrigeration and Freezing, Power Plants (Thermal & Hydraulic), Turbo Machinery, Gas Dynamics, Heat Transfer, Fluid Mechanics, Vibration and Control, Internal Combustion Engines