

OBJECTIVE

To obtain an engineering internship with Andretti Autosport.

EDUCATION

Michigan Technological University
BS Mechanical Engineering
GPA: 3.25

Houghton, MI
Expected Dec 2013

Leuphana University
Semester Abroad: Studied German Language

Lüneburg, Germany
Spring 2012

CO-OP/INTERNSHIP EXPERIENCE

Mercury Marine
Engine Test and Development Co-op
Project: Drivability Testing

Fond du Lac, WI
May – Dec. 2011

Objective: Evaluate the drivability of marine engines on regular fuel vs. blended fuel.

- Worked in a multidisciplinary, advanced engineering group.
- Tested 26 different engines, which involved procuring, troubleshooting, and repairing engines, rigging, instrumenting, and safety checking boats in addition to extensive on-the-water drive time.
- Used Mototune to gather and analyze engine data, change calibrations, and run sensor diagnostics.
- Investigated engine oil flow paths and oil filter characteristics of 115hp competitor engines.
- Created Testing Instrumentation Installation Guide for the new 150hp engine.
- Performed valve lash study on manufacturing floor before and after cylinder head installation on new 150hp.
- Presented bi-weekly updates on project progress and wrote a detailed technical report upon completion of testing.

Quality Edge
Engineering Internship
Project: CAD Plant Layout/Floorplan

Grand Rapids, MI
May – Aug 2012

Objective: Create 2D plant layout before completion of a new addition.

- Measured everything in the plant, including manufacturing components, tools, equipment, inventory, any and all floor elements.
- Drafted 2D floor plan using AutoCAD 2013.
- Used the floor plan I created to formulate completely new layout design including the addition.
- Modeled majority of product line in AutoCAD Inventor.
- Taught myself 3DS Max in order to animate CAD drawings and create product installation videos.
- Assisted on manufacturing floor if they had large urgent orders or the floor was short staffed.

ENGINEERING PROJECT EXPERIENCE

Senior Design Project (Currently in Progress): Tractor Implement Hydraulic Load Simulator

Objective: Design and build a device to emulate the loads placed on a tractors hydraulic system during the use of implements such as buckets and scrapers

- Weekly meetings with John Deere engineers for progress updates.
- The final project will provide a range of different loading cases on various hydraulic cylinders replacing the need to attach an actual implement to a tractor to record flow rates and pressures experienced in a tractor's hydraulic system during field use.

Project: Indestructible Expandable Wheelchair

Objective: Design a wheelchair to last the entire lifetime of a user.

- Used a 12 step design process to go from project brief to a prototype design.
- Wrote detailed technical reports tracking progress and planning for future steps of the project.

Project: DRZ125 Frame Modification

Objective: Strengthen frame and prevent engine case cracking issues that occur after excessive jumping along with upgrading the rear suspension for better ride quality.

CO-CURRICULAR INVOLVMENT

- American Society of Mechanical Engineers (ASME)
- Archery Club
- Intramural Athletics

COMPUTER/TECHNICAL SKILLS

- CAD (Solidworks, Inventor, UGNX)
- MATLAB
- Mototune
- Hyperworks (currently learning)
- GT Power (currently learning)
- Basic Mechanic Skills
- Microsoft Office (Word, Excel, PowerPoint)
- Building (wood and metalworking)

WORK HISTORY

Eubank's Dairy Farm

Grand Rapids, MI
Dec 2008 – Present

Farm Hand

- Troubleshoot, repaired and maintained all mechanical farm machinery:
 - Tractors and utility wagons
 - Combines
 - Skid Steers
- Built a milking parlor from ground up, including installing and operating automated milking system
- Renovated barn to house the milking parlor
- Built multiple calf barns with individual pens
- Cared for (fed and medicated) dairy cows and calves
- Harvested and bailed hay

Autodie LLC.

Grand Rapids, MI
Summer 2010

Manufacturing/Tool and Die Plant Laborer

- Assisted die makers – running 2 story auto car side panel presses
- Hauled parts and die assemblies with Hi-lows and overhead cranes
- Maintained manufacturing components and machinery
- Maintained clean manufacturing floor (swept a lot of floors)

RELEVANT COURSEWORK

- Internal Combustion Engines (GT Power)
- Vibrations
- Dynamics
- Senior Design (Project Management)
- PROD