Andrew Barba

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Objective

To gain knowledge and experience in the engineering field by obtaining an entry-level position as a Mechanical Engineer.

Education

Florida State University, Tallahassee, FL **May 2018**

Bachelor of Science, **Mechanical Engineering**.
Certification of Specialization: Thermal Fluids

Skills

- Creo Parametric (PROE)
- MatLab, C++, C
- AutoDesk ForceEffect
- MathCAD
- AutoCAD
- Microsoft: PowerPoint, Excel Word

Experience

3M at Cottage Grove Center – Cottage Grove, MN **June 2016 - August 2016**
Reliability Engineer Intern

- Worked with Reliability Engineers in the Plant Engineering division at 3M Company's largest factory in North America. Our site wide objective was to evaluate the current reliability of a process or machine and pinpoint the potential areas for reliability improvements in order to extend the lifetime of the machine, improve product quality, and overall increase the bottom line of the company.

Commercial Salmon Fishing - F/V Berserker – Naknek, AK **June 2014 - July 2014**
Professional Crewmember

- Lived at sea aboard a 32 ft. commercial fishing vessel for six weeks
- Daily responsibilities included setting nets, picking fish, mending nets and unloading fish all within a 16-20 hour typical work day
- Caught 105,000 lbs. of wild Sockeye Salmon with the assistance of only one other crew member
- Exceeded the sister boats net catch by over 30%
- Had to adapt to life out at sea, 24 hours of sunlight, long hours out on deck and nonperishable, canned food for every meal

ArtisTree Landscape and Design Inc. – Venice, FL **June 2013 - August 2013**
Tree Specialist

- Worked on a five-man crew performing tree removals, trimming, maintenance and storm clean up
- Part time driver of heavy equipment and personnel transport
- Gained knowledge in different species of trees along with how to maintain and trim various trees.
- Performed daily tasks of properly servicing all necessary equipment

Project Experience

Kite Generator **Fall 2017 – Spring 2018**

- Research and Develop a small scale generator powered by the oscillation of a kite due to the force of the wind. Design includes a solenoid, tether, glider, power converter, and a battery storage for power produced.

Low Power Mechanical Hack Saw **Spring 2017**

- Worked with a team to design, build, and optimize a system required to cut half inch steel with 4 AA batteries. A gear train was created to reduce the output velocity and increase the torque. A detailed system stress - strain analysis was done to determine critical load points while considering a factor of safety.

Autonomous Obstacle Detection Robot **Fall 2016**

- Worked on a team to develop a C programming code to implement into a dragon board which controls the operations of the vehicle. The vehicle simulated a wheelchair autonomously picking up an individual from their truck and dropping them off at the front of a restaurant. Infrared sensors were also integrated into the program for obstacle detection, obstacle avoidance, and for generating appropriate system responses for the shortest path to the restaurant.

Vehicle Stability Control **Fall 2016**

- Aided in coding a system which simulates the suspension stiffness of a vehicle given desired inputs such as type of vehicle, turning radius, speed of turn, and direction of turn. The program calculates the force exerted on the vehicle through the turn and displays the safety level on and LCD screen. If the safety level reached a dangerous level, the program would automatically adjust suspension and speed of vehicle in order to stabilize the vehicle back to a safe level.