JOSH MCDONALD

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EDUCATION

MASTER OF SCIENCE: AEROSPACE ENGINEERING 5/12/2018
University of Tennessee, Knoxville, Tennessee

Related Courses: Compressible Flow, Rocket Propulsion, Heat Transfer

- Thesis: Evaluation of Possible Solutions to Reduce Ground Source Heat Exchanger Cost
- GPA: 3.67

BACHELOR OF SCIENCE: AEROSPACE ENGINEERING 5/14/2016
University of Tennessee, Knoxville, TN

SUMMARY

Skilled professional awarded BS degree in Aerospace Engineering and will obtain Master of Science in Aerospace Engineering in May of 2018.

SKILLS

- Proficiency in MATLAB and Visual Basic
- Experience with Computational Fluid Dynamics (CFD)
- Applied use of Various Numerical Methods
- Excellent Time Management
- Excellent Problem Solving

EXPERIENCE

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, TN

Graduate Research Assistant

Worked as a research assistant for the Oak Ridge National Laboratory in the reduction of ground source heat exchanger installation costs through research of new and emerging technologies, creation of a survey to determine current installation practices, improvement of a provided cost model, and a parametric study of the cost model to aid in identifying key factors in the high installation costs.

NASA - UT SENIOR DESIGN

Design Team Member

Collaborated with fellow research teammates on a project for NASA. The project goal was to design an affordable rocket / balloon launch system. The rocket was to be elevated to 100,000 feet by a tethered balloon, then launched. The rocket was carrying a one-kilogram payload to low Earth orbit. As one of the team members, I collaborated on the rocket design. My individual task was to suggest alternative options (pros / cons) to lowering the total weight and costs being incurred.

ACTIVITIES AND HONORS

National Society of Leadership and Success

- Nominated by campus administrators, as a result of campus involvement, to participate in a leadership development program

Tripoli Rocketry Association (Levels 1 & 2 Certification)

- Level 1 certification earned by building, launching, and successfully recovering a rocket using a certified HPR motor in the H to I impulse range.
- Level 2 certification earned by passing a written examination and building, flying, and successfully recovering a rocket using a certified HPR motor in the J to L impulse range.
- Currently working on level 3 certification

American Institute of Aeronautics and Astronautics (AIAA)