Alastair Crowe

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EDUCATION

Bachelor of Science in Mechanical Engineering **Graduated May 2018**
University of Colorado at Boulder Final GPA: **3.75**
Honors: Cum Laude, CU Hale Esteemed Scholar, and Kenneth Forsythe Scholarship Recipient
Certifications: SolidWorks Associate Certification, December 2015

ENGINEERING AND DESIGN EXPERIENCE

Technical Intern May 2017 – May 2018
Ball Aerospace *Boulder, CO*

- Designed and modeled multiple iterations of a solvent spray workstation used to improve the quality and reliability of Ball's paint lab processes
- Optimized design of a collapsible racking fixture used for critical flight hardware by ensuring load capacity and maximization of batch size
- Redesigned paint mixing vestibule based on requirements gathered from a cross-disciplinary team of technicians, industrial engineers, process engineers, and EHS staff
- Managed suppliers, finances, build vs buy decisions, and schedules of multiple capital projects
- Created dozens of manufacturing drawings for parts receiving mill, weld, and sheet metal operations

Project Manager – Flow Visualization Project for Micro Motion August 2017-May 2018
Design Center Colorado *Boulder, CO*

- Project manager of team of 6, responsible for project scheduling, specification of requirements, and coordination of work on sub systems
- Leveraged knowledge of MatLab imae processing and high speed videography to verify system performance with the use of open-source particle image velocimetry software
- Informed design of 3D printed venturi degassing tubes with results of CFD simulation
- Responsible for specification of pump and valve control system designed to meet flow and pressure requirements of fluid test stand

Electric Powered Vehicle January-May 2017

- Designed and Modeled components with strict size restrictions for drivetrain of vehicle
- Fabricated custom steel and aluminum components using a mill and MIG welding
- Served as project manager with the responsibly of facilitating team meetings, leading team members, and ensuring project deadlines were met

Mechanical Engineering Intern May-July 2016
MWH Global (Anglian Water) *Peterborough, England*

- Developed a stainless-steel sump that was estimated to save £44,000 over a 5 year period and reduced installation time by 80% when compared to the existing method
- Optimized sump design to allow for high volume manufacturing
- Conducted survey on operational carbon output reporting to provide better understanding of carbon data for the sustainability team at Anglian Water

TECHNICAL SKILLS

Software

- SolidWorks (600+ hrs), MATLAB (400+ hrs), ABAQUS (FEA) (50 hrs), AutoCAD (100 hrs), Mathematica (75 hr), Microsoft Office (3000+ hrs), and Adobe Premiere (200+ hrs)

Design for Manufacturing Experience

- CNC Mill, GD&T, Laser Cutting, Water Jet, MIG and TIG Welding, 3D Printing

Relevant Courses

- Computer Aided Design and Fabrication, Optimal Design, Manufacturing, Finite Element Analysis, Computational Methods

LEADERSHIP AND ADDITIONAL EXPERIENCE

Team Member May 2015 - Current
Rocky Mountain Paddle Board *Boulder, Colorado*

- Supervised and ran paddle board rental shop at Boulder Reservoir
- Single point of contact for customers from arrival to departure

High School Youth Group Leader Fall 2015 – Current
Boulder Valley Christian Church *Louisville, Colorado*
Mentoring high school students

- Promoted and documented events by creating short form videos shared on social media
- Planned weekly events for the students with fellow leaders