SAMANTHA R. EALY

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EDUCATION

Carnegie Mellon University Pittsburgh, PA
Bachelor of Science in Mechanical Engineering May 2019

EXPERIENCE

Procter & Gamble Inwood, WV
Manufacturing Engineering Manager July 2019 – Present

- Delivered 55% process reliability improvement in repeated robotic system failures enabling an annual savings of $3.1MM in unplanned downtime, with reapplication to five start-up production lines for a total of ~$15MM in downtime savings
- Improved raw material utilization to deliver $760M in annual savings through reliability engineering enabled by data analysis
- Led collaboration cross-functionally to reduce process failures and improve monthly throughput by 125%
- Managed development and deployment of qualification for daily management system of equipment specific setpoints to 80 line technicians and qualified 8 individuals allowing for 4 promotions
- Created dashboards to visualize data in PowerBI to simply weekly action reports on key performance indicators (KPIs) for the equipment
- Automated data entry of equipment specific setpoints using Python to improve the time efficiency of data collection by 75%
- Pioneered forum to improve work culture and career progression for 12 new hire managers

aiPod Pasadena, CA
Electromechanical Engineering Intern June 2018 – August 2018

- Designed and created CAD model of sensor packaging and performed stress/thermal analysis in SolidWorks
- Collaborated in optimizing computer vision algorithms centered on object classification using OpenCV resulting in an increased frame rate by 50%
- Tested multiple iterations of vehicle-to-infrastructure communication for autonomous vehicles using DSRC radio
- Completed cost benefit analysis on computer processors, thermal cameras, and sensors to determine the components to buy

SKILLS

Software Tools: SolidWorks, MATLAB, Microsoft Office, Power BI, SAP, Visual Studio
Programming: Python, C, C++, HTML, CSS, SQL
Fabrication: CNC Machining, 3D Printing, Laser Cutting

PROJECTS

Self-Leveling Pinball Machine Fall 2018

- Re-engineered a pinball machine equipped with an automatic leveling system using DC motors controlled by an Arduino, allowing up to a 0.3-degree accuracy
- Machined gimbal system and rewired electrical components into a remodeled weight-efficient cabinet by converting basic design requirements into mechanical drawings
- Awarded at Mechanical Engineering Design Exposition for the Best Prototype and Best Overall

Scotty Dog's Retro Arcade Fall 2018

- Launched application consisting of popular arcade games in a team of 5 developers and led debugging efforts through integration testing using C++ in Visual Studio

Swinging Robotic Gripper Fall 2017

- Led a team of 5 engineers to design and fabricate a robotic gripper, provided a small motor torque, to hold on to a 1.5 kg aluminum weight during a pendulum simulation given contact constraints
- Implemented CAD modeling to perform stress analysis and determined required ratios for gear mechanism

Astronaut's Coat Rack Fall 2017

- Designed, laser-cut, and tested an acrylic bracket to hold 40 pounds of downward force
- Utilized stress and failure simulation, geometry/strength/mass optimization, CAD modeling, and finite element analysis
- Iterated through several designs and awarded for lightweight bracket of 3.2 grams

SPIRIT Racing Systems September 2016 – September 2018
Mechanics Rolls Chair

- Maintained and refined 5 composite-based, unpowered racing vehicles (buggies), equipped with a steering and braking system, rear axle, windshield, and polyurethane wheels
- Led 23 mechanics in supplemental projects, such as, constructing new windshields, wheel heating, molding, and machining parts, to optimize buggy functionality and speed