SAMANTHA R. EALY

Email: samanthaealy66@gmail.com • **Phone:** (631) 624 3503
Portfolio: samanthaealy.github.io

EDUCATION

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

PROFESSIONAL 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 and root cause analysis
- Built data infrastructure to automate entry of setpoints improving the time efficiency of data collection by 75%
- Led collaboration cross-functionally to reduce process failures and improve monthly throughput by 125%
- Managed development and deployment of qualification for daily management system to 80 line technicians and qualified 8 individuals allowing for 4 promotions
- Created dashboards to visualize big data in PowerBI enabling analysis of key performance indicators (KPIs) for the module
- Pioneered forum to drive career progression and generate mentor relationships with leadership 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: Visual Studio, SolidWorks, MATLAB, Microsoft Office, Power BI, SAP
Languages: Python, SQL, C, C++, HTML, CSS, Javascript (React.js)
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

LED Sand Simulator Spring 2018

- Programmed Arduino to produce an interactive, portable light display that responds to gravitational motion using an RGB LED Matrix Panel and accelerometer

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 award-winning, lightweight acrylic bracket of 3.2 grams to hold 40 pounds of downward force
- Utilized stress and failure simulation, geometry/strength/mass optimization, CAD modeling, and finite element analysis

SPIRIT Racing Systems - Mechanics Rolls Chair September 2016 – September 2018

- 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