Daniel **Rhyoo**

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EXPERIENCE

Baxter, IL - Healthcare
R&D Intern in Renal Therapy
MAY 2019 – AUGUST 2019
- Authored test studies for various equipment and new products to validate design outputs
- Designed and performed testing of various products
- Developed an Electron based IoT hub that connects to various medical devices

Honda R&D, OH - Automotive
Engineering Intern in VS1 (Body CAE)
MAY 2018 – AUGUST 2018
- Solo designed and created a tool from the ground up (mechanical, electrical, and software) that automatically tension tests components up to 175kN by real-time reading strain gauge sensors and controlling motors
- Performed an investigative CAE into a component by 3D scanning, re-modeling, CAE, and validating results using physical testing

GE Aviation, OH - Aerospace
Engineering Intern in Continuous Engine Operation Data
MAY 2017 – AUGUST 2017
- Developed tools, like historical trend graphs, data filtering, etc., for Flight Phase Analyzer (GE's web/Predix based analytic viewer) using JS and R Shiny
- Created a prediction model (regression) for estimating maintenance duration based on multiple engine module parameters using Python and R
- Created a cost analysis report on potential savings in modifying data intake process
- Developed a web tool to automate and standardize the creation of value story presentations

WET Design, CA – Water Entertainment
Product Development and Engineering Intern
JUNE 2016 – AUGUST 2016
- Designed and machined experimental valves that emphasized simple mechanisms and low cost
- Created and programmed data loggers to remotely monitor test rigs for long periods of time
- Designed and prototyped a full redesign of an existing product that lowered cost and ease of serviceability/installation with two team members

LEADERSHIP EXPERIENCE

IFE: Formula SAE Electric Team
AUGUST 2016 – PRESENT
Integration Captain (2018 – 2019)
- Upgraded CNC plasma tube profiler to 4-axis to cut square tubes
- Designed and created data acquisition system using AWS IoT Analytics
- Designed and manufactured new accumulator and ran/setup FEA on new upright

Manufacturing Captain (2017 – 2018)
- Designed and manufactured a CNC plasma tube profiler, accumulator box, and mounts
- Worked on establishing a simulation/DAQ-Analysis system through remote server
- Created and programmed multiple data loggers for recording the car's temperature, acceleration/gyro, wheel RPM, pressure, etc.

Suspension & Chassis Subsystem Member (2016 - 2017)
- Pioneered use of topology optimization software, Inspire, in the team to minimize weight on bell cranks (Weight saving: ~45% from base model) and other parts
- Designed and manufactured a custom carbon fiber steering wheel, adjustable/folding, and jacking bar
- Assembled and TIG welded car and parts like aluminum accumulator container
- Modified/ran passing FEA for 20kN accumulator mounting points

PROJECTS (MORE ON DANIELRHYOO.COM)

IOT Networks (2019)
- Created 5000 node simulated IOT EKG network on AWS for real time heart analysis using ML
- Created 2.4ghz sniffing xbee network to monitor and track usage of multiple classrooms

EDUCATION

University of Illinois at Urbana-Champaign
EXPECTED GRADUATION: FALL 2019
B.S. in Mechanical Engineering

AWARDS

Class 1st Place in Automata Walker Race
ME370 Final Competition
by UIUC MechSE

Ford Blue Oval Scholarship
by UIUC & Ford

Outstanding Achievement Award for Excellence in Engineering Design
ME170 CAD Design Award
by UIUC MechSE

SKILLS

CAD
Solidworks
Creo 3.0
Catia
Inventor

Analysis
Solidthinking Inspire
Solidworks FEA
ANSYS
ANSA
Abaqus
NASTRAN

CAM
Experience in a machine shop
(Mill, Lathe, CNC, Waterjet, TIG)
Intelli-Max CAM
HSMworks CAM
SheetCam

Programming
JavaScript
Python
NodeJS
Golang
R Shiny
Java
C++
SQL