Dominic M. Rodts

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Professional Summary

Effective leader and enthusiastic team member pursuing a hands-on and interactive full-time position where I will be working with distributed energy resources to improve energy delivery and efficiency.

Education

North Carolina State University, Raleigh, NC Anticipated Graduation May 2022
B.S. Mechanical Engineering, **GPA: 4.0**
Minor in Renewable Energy Assessment, **GPA: 4.0**
University Scholars Program

Work Experience

Emerging Technologies Office Engineering Intern, Duke Energy Corporation, Charlotte, NC May 2021 to August 2021

- Commissioned a $125,000 DC Micro-grid that ran on DC generation sources, wiring, loads, and controls
- Enabled communication between PLC controllers and meters using Modbus and other OSI model communication methods
- Initiated technical conversations to install DC loads such as an EV charger, battery storage, and an eBike to the DC Micro-grid
- Designed, wired, and standardized 380VDC outlets for the DC Micro-gird

Distribution Design Engineering Internship, Duke Energy Corporation, Durham, NC. June 2020 to December 2020

- Designed 15 single-phase power delivery systems to residential and commercial services
- Created a tool to prioritize 3000 Durham pole repair work orders based on risk, grid reliability, and customer outage potential
- Facilitated conversations to implement the pole prioritization tool across all of Duke Energy Carolinas
- Conducted audits on 20+ construction jobs to verify issued versus as built materials

Process Engineering Co-op, Shurtape Technologies LLC. Hickory, NC May 2018 to December 2019

- Directed a $750,000 equipment installation, start-up, and training for new packaging line with two Fanuc robots
- Implemented a new work center to recover and rework $200,000 of waste product back into production per year
- Designed and fabricated engineering solutions to improve production efficiency and safety
- Began the process to Standardize the purchase and use of the plant's raw materials
- Created procedures to optimize line-speed to reduce an estimated of $250,000 of waste and increase throughput
- Collectively my work has estimated savings of $1,500,000 per year

Academic and Personal Projects

- Simulink PID Controller design and implementation to stabilize an unstable system, Renewable Energy Site Assessment and Project Proposals, MATLAB Beam Deflection Simulations, Solidworks Component Design, and 3D-Printed Original Board Game

International Experience

Summer Study Abroad Program, Zhejiang University, Hangzhou, China May 2019 to July 2019

- Caterpillar Design Project: re-designed Power and Idler Links to reduce required material by 50% as part of a mixed Zhejiang-NCSU student team

Activities and Honors

Society of Sales Engineering at NC State, Co-Founder and President August 2019 to Present

- SSE offers students a chance to explore technical sales and interact with company leaders, making them "job ready" at graduation
- Managed 30 engineering student members and coordinated bi-weekly professional development workshops
- Partnered with 20+ company partners (including Cisco and Eaton) and raised $12,000 in corporate partnerships
- Earned 2nd and 3rd place at the National Sales Engineering Competition in 2020 and 2019 respectively

College of Engineering Ambassador, Engineering Ambassador April 2018 to Present

- Recruited prospective engineering students, conducted 40 information sessions and tours
- Teaching Assistant for Engineering 101 and Fall Training Coordinator

Catholic Campus Ministry, Fall Retreat Coordinator and Member September 2017 to Present

- Orchestrated weekly Bible Study and mentorship meetings for 4 semesters
- Small Group Bible Study Leader and Freshmen Retreat Coordinator

Pi Tau Sigma, Member May 2020 to Present

- Mechanical Engineering Honor Society

Skills and Strengths

- MATLAB/Simulink
- Solidworks/Fusion 360
- BOUD
- Maximo
- Welding and Milling
- Lean Six Sigma Exposure
- Attention to Detail
- Problem-solving mindset
- Team-first mentality