DANIEL SIMOES

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Education

Cornell University, College of Engineering   Ithaca, NY
Bachelor of Science, Mechanical Engineering, 6-time Dean's List Recipient   Expected May 2026
GPA: 4.0
Related Courses: Electromagnetism, Automotive Engineering, Mechatronics, Object-Oriented Programming (Java)

Relevant Experience

Wabtec, Erie, PA, *Engine Reliability Intern*   May-Aug 2025
- Analyzed engine performance and fault data to determine leading cause of road failures related to low oil pressure
- Arranged root cause results for fleet team to utilize when making solution recommendations to the customer
- Updated predictions of low oil pressure shutdown dates on close to 400 engines using Python
- Identified solutions to engine bogging failures frequently diagnosed as "no trouble found"
- Presented my work to engine reliability team members to discuss results and plan next steps

Komatsu Mining, Franklin, PA, *Mechanical Engineering Intern*   May-Aug 2024
- Performed design changes on underground mining equipment using Autodesk Inventor
- Documented changes using an engineering change master through SAP Enterprise Resource Planning (ERP)
- Collaborated with a team of five engineers to brainstorm and develop an updated design to a mining hauler
- Presented my work to upper management throughout my design process

Relevant Projects

Robot Cube Collecting Competition, Cornell University, *Mechatronics*   Spring 2025
- Assembled a robot equipped with wheels driven by DC motors; supplied with a metal frame
- Designed unique 3D printed parts using CAD software (Fusion 360) to collect cubes while the robot drives
- Programmed an Arduino Uno to handle input and output commands reliant on color sensor behavior
- Wired and powered all electrical components with breadboards and batteries mounted to the robot
- Reached the semifinal round of a bracket style tournament against classmates (more details on LinkedIn)

Load Cell Design, Cornell University, *Mechanics of Materials*   Fall 2024
- Designed a load cell equipped with strain gauges to meet requirements on strain, factor of safety, and geometry
- Implemented design into Fusion 360 and performed FEA under a compression load using Ansys

Project Pool Pal, Cornell University, *Mechanical Synthesis*   Spring 2024
- Used Fusion 360 to design a moving underwater camera system for evaluating swimming technique
- Worked with Cornell Rapid Prototyping Lab to receive specific materials for product assembly
- Performed water testing to evaluate product performance for redesigning process; obtained successful video
- Collaborated with three other students and presented our product to the class (more details on LinkedIn)

Division I Intercollegiate Athletics

Cornell Men's Swimming and Diving Team, Cornell University, *Member*   Aug 2022-present
- Committed to training twenty hours a week and supporting teammates
- Team Captain 2026 season, elected by teammates
- School Record Holder (200 Free Relay), 2-time Hardest Worker Award Recipient (2023 and 2025 seasons)

Red Key Athletic Honor Society, Cornell University, *Member*   May 2024-present
- Aimed to improve campus and community through volunteer opportunities, nominated by coach
- Volunteer weekly at Newfield Elementary School supporting children in math and social studies

Skills and Abilities

Programs: CAD (Inventor, Fusion 360), MATLAB, Arduino, Java, Python, SAP ERP, Ansys (beginner), Microsoft apps