

# LIU (DANIEL) WEI

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## EDUCATION

**Northwestern University**, Evanston, Illinois

Master of Science in **Mechanical Engineering** | Bachelor of Science in **Mechanical Engineering** Anticipated 6/21

Cumulative GPA: **3.39/4.00**

Relevant Courses: Thermodynamics, Mechanics of Materials, Fluid Mechanics, Managerial Analytics for Strategy, Engineering Analysis, Electronics Design, Deterministic Models and Optimization, Public Speaking

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## RELEVANT EXPERIENCE

**Northwestern University**, Evanston, Illinois

**Laboratory for Intelligent Mechanical Systems Research Assistant** 6/20 – 9/20

- Conducted research with a PhD student on the haptic interaction between an electrostatic surface and a human finger
- Assisted in the application of design-model comparison and iterative improvement of a device to cause a rigid surface to actively force a human finger by using electrostatic forces triggered with lateral vibrations
- Developed an artificial fingertip with electric and mechanical properties similar to a real human fingertip using semiconducting carbon-black-loaded elastomers, resistivity measurements and dynamic mechanical analysis
- Designed and assembled a miniature lightweight accelerometer circuit board using EAGLE and flexible circuit boards

**Alimentos S.A.**, Beijing, China

**Engineering Project Management Intern** 7/19 – 9/19

- Led the design and development of an innovative and cost-efficient product display method (patent pending) by coordinating materials acquisition and machine shop staff to produce prototypes in the shortest time possible
- Minimized project implementation costs using raw material market research, iterative simplification of design, and dimension optimization to achieve a potential six-digit annual savings figure for the company
- Performed experiments to assess the performance of three ergonomic transport and delivery cartridges for client orders
- Proposed a design for an improved order transport and delivery mechanism by combining all of the efficient and beneficial components from the previous designs, and applying failure mode analysis and design thinking
- Presented project progress and results to the President, General Manager, and majority of division directors at the company using PowerPoint; successfully convinced them of the profitability of its execution

**Design Thinking and Communication Course**, Northwestern University, Evanston, Illinois

**Client: Hospital Sisters Mission Outreach, Chicago, IL** 4/18 – 6/18

- Designed a self-sustaining pharmacy for a medical center in Migori, Kenya using a repurposed shipping container
  - Coordinated the selection of solar-powered ventilation and lighting systems for the pharmacy and the interior design
  - Organized the timely completion of assignments and motivated 4-person team to complete checkpoints before deadlines
  - Wrote final report and instructions for construction of the pharmacy and presented the design to the client
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## LEADERSHIP

**Northwestern University Formula Racing, Drivetrain Team Member** 10/19 – Present

- Contribute to designing, manufacturing and tuning the drivetrain components of a formula racing car intended for the annual Formula SAE Michigan competition
- Optimize the car's intake and exhaust system with a redesign to give it a 10% boost in power

**Phi Kappa Psi Fraternity, Illinois Alpha Chapter Member** 4/18 – Present

- Promote and facilitate multiple philanthropy activities, fundraising events and new member recruitment
  - Applied parliamentary procedure to engage in discussions about chapter governance
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## SKILLS

**Language:** Spanish (fluent), Italian (conversational)

**Computer:** Proficient in MATLAB, SolidWorks, EAGLE, AMPL, R, STATA, Excel, and PowerPoint

**Laboratory:** Electrical resistivity measurement, data regression and analysis, dynamic mechanical analysis, stress-strain testing, titrations, filtrations, dilutions, and other standard laboratory chemical procedures