

# Darren Biskup

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## EDUCATION

### University of Illinois, Urbana-Champaign

*B.S. Mechanical Engineering, Computer Science Minor*

- James Scholar Honors Program, Dean's List
- American Society of Mechanical Engineers

GPA: 3.91/4.00

May 2024

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## EXPERIENCE

### Skydio

MAY 2022 - AUGUST 2022

*Product Design Engineering Intern*

- Design for Injection Molding: Utilized CATIA 3DEXPERIENCE to redesign the Navigation Camera mounting mechanism for the company's next generation performance drone.
- Communicated with overseas vendors in China to implement design change, ensuring injection moldability and minimal lead time.
- Kicked off \$18,000+ in injection mold retooling cost for redesigned Proto2 Navigation Cameras.
- Designed and prototyped the mobile tablet adapter for the next generation drone controller using FDM and SLS 3D-Printing. Received DFM feedback from injection molding vendor.
- Worked with Manufacturing Engineers to design and prototype optimal wire routing layout for drone electronics. Prototyped wire clips and wire guides for injection molding and ordered ~\$6,000 worth of these parts from the injection molding vendor.

### Lucid Motors

MAY 2021 - AUGUST 2021

*Mechanical Engineering Intern, High Voltage*

- Battery Pack Development: Improved on design for the high voltage chain reducing the number of bolts required to join busbars by 50% per battery pack.
- Devised a method of measuring resistance of busbar joints up to 50% more accurate than the HIOKI low ohmmeter.
- Planned, conducted, and interpreted stress tests on bolted busbar joints to analyze how joint design performs at EoL
- Collected and analyzed data on heat generation from bolted busbars joints, and used this data to calculate theoretical horsepower and efficiency loss of specific joints.

### Eco Illini Supermileage

JAN 2021- PRESENT

*Battery Subteam Lead*

- Redesigned the battery pack to compete in the upcoming Shell Eco-marathon. Design decreases pack size by 50% while increasing volumetric energy density by 33%. The pack also saw a decrease in weight by 25% attributable to the switch from 18650 Li-on cells to 21700s.
  - Worked across multiple subteams to design and waterjet a carbon fiber Nomex firewall separating the driver's cockpit and dangerous powertrain components.
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## RELEVANT COURSEWORK

- Statics, Dynamics, Solid Mechanics, Fluid Dynamics, Dynamics of Mechanical Systems, Thermodynamics, Mechanical Design, Design for Manufacturability, Differential Equations, Linear Algebra with Computational Application, Algorithms and Data Structures, Physics Mechanics/E&M, Electric/Electronic Circuits
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## PROJECTS

*Magic Hanger*

- Devised a unique clothes hanger which is designed to assist people with disabilities. Constructed working polyurethane foam prototypes and also created CAD models using Fusion360.

*Subwoofer Restoration*

- Used power tools to grind and replace a pair of worn subwoofer cones, then used a tuning software to attach the precise amount of mass to the speaker cones to resonate with the passive radiator.
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## SKILLS

**Computer Programming:** C++, Java, Kotlin, and Python. Self-taught HTML and CSS

**Computer Aided Design:** CATIA 3DEXPERIENCE, Autodesk Fusion360, Solidworks

**Languages:** Mandarin (fluent), Japanese (intermediate)

**Other Skills:** Classical Piano (CM Panel State Honor), Chinese Calligraphy, Symphony Orchestra Piano accompanist