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Darren Biskup

EDUCATION

University of Illinois, Urbana-Champaign GPA: 3.91/4.00

B.S. Mechanical Engineering, Computer Science Minor *May 2024*

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

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 a 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 parts.

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 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, 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 with the Mechanical Subteam to harness the battery pack of the G5E electric vehicle securely to the firewall.

RELEVANT COURSEWORK

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

PROJECTS

Magic Hanger

- Devised a unique clothes hanger which assists people with disabilities at the Georgia Tech Industrial Design Summer program 2018. 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.

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, Violin (ABRSM grade 8), Homestead Symphony Orchestra Piano accompanist