OMKAR GANDHI

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EDUCATION

University of Illinois at Urbana-Champaign **Expected Graduation: May 2026**
Bachelor of Science in Engineering Mechanics, Minor in Computer Science
Relevant Coursework: Mechanical Design I, II | Solid Mechanics Design | Computational Mechanics

SKILLS

Programming Languages: C/C++ | Python | Java
Tools: LabView | PTC Creo | Fusion 360 | SolidWorks | Ansys | KISSsoft | KISSsys | ImageJ

EXPERIENCE

Energy Transport Research Lab **Champaign, IL**
Undergraduate Researcher *February 2024 – Present*
- Conducted research into the absence of etching protocols for internal surfaces in heat exchangers
- Designed and built experiment within wind tunnel facility to validate theory
- Characterizing properties and devising applications of heat transfer through three phase flow pool boiling

Illini Electric Motorsports **Champaign, IL**
Drivetrain and Aerodynamics Engineer *August 2022 – Present*
- Designed structural elements of hub-carrier for 2023 vehicle and prototyping gears for 2024 vehicle
- Simplified and organized manufacturing process and molds for fabrication of front and rear wing elements
- Manufactured body elements and nosecone for an all-wheel drive electric go-kart with greater structural integrity and easier assembly using a new attachment method

Entrib Analytics **Pune, India**
Manufacturing and Data Engineer *June 2023 – August 2023*
- Documented data and installation processes for easier integration of future employees and interns
- Worked on ShopWorx product that offers real-time data insight into CNC machines and controllers
- Programmed, debugged, and conducted testing and validation on Siemens S7 1500 through TIA Portal

PROJECT

Hub-Carrier and Gears Project *August 2023 – August 2024*
- Reduced friction and heat losses by researching and selecting rotary shaft seal to contain gear oil bath
- Conducted extensive bearing life analysis and selected optimal bearings for an efficient corner assembly
- Designed a preload plate to extend bearing life and to optimize the drivetrain's performance and efficiency
- Packaged an optimized planetary gearbox within the hub (FSAE Michigan 2024: 4th Design, 7th Overall)
- Secured $30,000 sponsorship in angular contact bearings for 2024 vehicle drivetrain package

ETRL – Pool Boiling Apparatus *February 2024 - Present*
- Designed insulation package for copper calorimeter consisting of three ceramic plates with tight tolerances
- Ideated and designed custom stainless steel plate that acts as specimen holder and experimental base
- Devised and built workbench for heat exchanger apparatus and conducted experiments to validate theory

LEADERSHIP & INVOLVEMENT

Ascend UIUC Chapter **Champaign, IL**
Director of Professional Development *January 2024 - Present*
- Design and lead workshops to help 25+ new members learn professional etiquette and refine portfolios
- Engage in a diverse array of cultural, philanthropic, and community-oriented activities and events
- Selected from a pool of 90+ applicants through a two-step interview process to gain professional acumen