

CHRISTOPHER HEIN

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U.S. Citizen

EDUCATION

University of Notre Dame, College of Engineering

Notre Dame, Indiana

BS in Mechanical Engineering, concentration in Computational Engineering

May 2020

- Dean's List, Tau Beta Pi Honor Society
- Summer 2018 Study Abroad: Berlin, Germany

GPA: 3.94/4.00

INTERNSHIPS

GE Renewable Energy

Shreveport, Louisiana

Manufacturing Operations Intern / Grid Solutions

May 2019 – Present

- Generated proposal for >\$200,000 washer by quoting suppliers, performing cost analysis, and engaging Operations team
- Managed cross-functional team to design and install polyethylene replacement for wooden pallets, reducing safety risks
- Supported 5S/Lean implementation by performing time studies and composing productivity reports to reduce cycle times

Sanitary District of Decatur

Decatur, Illinois

Engineering Intern

May 2017 – Jul 2017

- Calculated piping system pressure loss to develop maintenance plan for 22 pump stations serving over 100,000 residents
- Created an interactive Excel tool, enabling engineering team to visualize design change impact on system performance
- Facilitated design meetings for a multimillion-dollar wastewater plant rehabilitation project

EXPERIENCE

Go Research Group

Notre Dame, Indiana

Research Assistant

Jan 2019 – May 2019

- Experimented with various setups of plasma jets to determine if short-term plasma exposure increases material conductivity
- Analyzed data in MATLAB and communicated results in weekly presentations and final report

AME Department, University of Notre Dame

Notre Dame, Indiana

Teaching Assistant / Intro to Engineering Computing

Aug 2018 – Present

- Led office hours and helped students debug Fortran code, navigate Unix, and hone technical writing
- Collaborated with a new professor on how to effectively structure and teach the course curriculum

NASA Student Launch Competition – Notre Dame Rocket Team

Notre Dame, Indiana

Team Member: Rover Payload (2017), Recovery Systems (2018)

Aug 2018 – Present

- Designed HDPE plastic rover body and CNC milling routes in Creo Parametric
- Performed analytical stress studies of spring-loaded parachute deployment system
- Executed full design cycle: genesis, technical changes, prototyping, testing, and final design
- Composed sections of Preliminary and Critical Design Reviews, which were evaluated by NASA personnel

LEADERSHIP

LEGO Club of Notre Dame

Notre Dame, Indiana

Co-founder / Secretary

Sep 2016 – Jan 2018

- Co-created and founded new recreational club of 20+ members
- Assisted with numerous Lego set building sessions, concession stands, outreach events, and projects
- Developed promotional materials that resulted in over \$2000 raised for the club

COMMUNITY SERVICE

South Bend Center for the Homeless – weekly volunteering at a South Bend homeless shelter

Aug 2017 – Present

Adopt a Family Christmas Initiative – meal delivery program for impoverished families

Nov 2016 – Present

SKILLS/INTERESTS

Technical: MS Office, PTC Creo, MATLAB, FEA Software, 3D Printing, Microcontroller C, Fortran, Unix, LaTeX, basic Java

Professional Interests: Mechanical Design, Data Analysis, Renewable Energy Technology, Power Market, Financial Markets

Personal Interests: Investing, Web Development, Piano, Science fiction novels, Traveling, College football, Skiing