

Bridget Friel

EDUCATION

University of Illinois at Urbana-Champaign

Expected Graduation: May 2024

Bachelor of Science in Chemical and Biomolecular Engineering

Minor: Sustainability, Energy, & Environment Fellows Program

- Awards: James Scholar Honors Program / Dean's List FA20, SP21 & SP22

WORK EXPERIENCE

Siemens Gamesa Renewable Energy

Orlando, Florida

Health, Safety & Environment Intern & Student Contractor

May 2022-Present

- Improved data quality by closing 70% of open incidents for a period of 8 months
- Cooperated with EHS and the service operations team in the field to complete risk assessments
- Interpreted environmental procedures to determine which sites need to report environmental data
- Facilitated the usage of a forecast file in the finance department by automating several of the features through Microsoft Excel functions

Centennial Park Aquatic Center

Orland Park, Illinois

Cashier

May-September 2019, 2020, & 2021

- Displayed exceptional communication to connect with employees, management, and customers
- Supervised new hires, acting as a mentor by demonstrating the daily operations
- Entrusted with cash daily as well as other forms of payment

RESEARCH EXPERIENCE

Stillwell Research Group

Urbana, Illinois

Undergraduate Researcher

August 2022-Present

- Coordinated with biodiesel production facilities within the United States to collect data purity, amount, present storage/location of a by-product, glycerol
- Familiarized oneself with the methods for both biodiesel production and purification processes in order to prepare for assisting in a techno-economic analysis and life cycle assessment of a co-electroreduction of carbon dioxide and glycerol to value-add chemicals
- Communicated findings from the biodiesel production facilities to colleagues working on the technical portion of this research in the chemical engineering department

Mironenko Research Group

Urbana, Illinois

Undergraduate Researcher

August 2021-May 2022

- Computed bonding energies of small molecules using PySCF and performed method benchmarking to assist graduate student in developing reactive force fields simulating catalysis
- Studied the relationship between the overlap matrices and exchange energies of homonuclear diatomic molecules
- Summarized these results each semester through means of a presentation, discussing possible future plans with the data and any areas of possible improvement

LEADERSHIP

Reaching and Educating America's Chemists of Tomorrow (R.E.A.C.T)

Urbana, Illinois

3rd Grade Coordinator

January 2021-Present

- Created lesson plans for 3rd graders, incorporating chemistry related activities and demonstrations for children in the Urbana-Champaign area
- Oversaw the training of volunteers, preparation of materials, and collaborated with schools in the area for events
- Conducted experiments with 1-3 other volunteers on virtual visits with these schools

SKILLS

Laboratory: UV-Vis, IR, FT-IR, NMR, Distillations, Gel Electrophoresis, TLC & Column Chromatography, HPLC

Computer: Python (PySCF), Microsoft Office Suite (Excel, PowerPoint, Word)