



**Lauren Pardi**  
**Chemical Engineer Trainee**

Paustenbach and Associates  
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### **Academic and Professional Profile**

Lauren Pardi is a chemical engineering trainee at Paustenbach and Associates. She is a consultant in training in toxicology, occupational health, industrial hygiene, risk assessment, and environmental engineering. She is a third-year student at the University of Notre Dame, majoring in chemical engineering. Her current projects involve litigation work related to airborne chemicals, radionuclides and asbestos. Lauren uses her technical knowledge of over half a dozen programming languages and modeling software systems to analyze data. She has a passion for problem solving and chemistry, which drives her interest in the field of consulting and environmental engineering.

### **Education**

- Bachelor of Science in Chemical Engineering, University of Notre Dame, Expected May 2022
- High School Diploma, Academy of the Sacred Heart, 2018

### **Honors and Awards**

- University of Notre Dame College of Engineering Dean's List Fall 2020
- Academy of the Sacred Heart Salutatorian 2018
- Archdiocese of Detroit Scholastic All Catholic Award for being one of the top academic students in metro Detroit - received in 2015, 2016, 2017, and 2018
- 2017 Wansboro Merit Scholarship, awarded to the junior who best exemplifies the aspirations of all Sacred Heart students
- 2017 Michigan Technological University Society of Women Engineers Award of recognition for mathematic and scientific excellence

### **Membership to Professional Societies**

- American Institute of Chemical Engineers

- Society of Women Engineers
- National Honor Society

### **Experience Summary (Professional Career)**

**Paustenbach and Associates  
Chemical Engineer Trainee  
Jackson Hole, Wyoming Office  
December 2020 – Present**

- Consultant trainee in toxicology, occupational health, industrial hygiene, risk assessment, state of the art, and safety
- Involved in litigation work, interpreting toxicological studies, and characterizing risks posed by chemicals and radionuclides in the environment
- Analyzed large data sets and created models using principles of data visualization to effectively communicate findings

**Proforma  
Quality Assurance Analyst Intern  
Tampa, Florida Office  
Summer 2019**

- Supported the development team in creating a proprietary ordering system, ProVision 2
- Tested operation of the system by running various mock order scenarios
- Evaluated system for intuitiveness of use and noted operational efficiency
- Created trouble tickets when system did not perform according to the program specifications

### **Leadership Summary**

- Notre Dame Engineering Leadership Council – Junior Director of Engineering Week for 2020-2021
- Notre Dame Equestrian Team – Secretary for 2020-2021
- Angel's Place Youth Council – President for 2017-2018
- VexRobotics High School Team – Captain for 2016-2017 and 2017-2018 academic years

### **Key Projects**

1. **Assessment of the impact of airborne chemicals and radionuclides at the Hunter's Point site.** Reviewed all the available information and data to evaluate claims that airborne dust from the site pose a cancer hazard to the community. Used Excel and Python to analyze air data to further the understanding of the site's environmental effect. Wrote a report of the findings and presented it to colleagues and clients.

2. **Transport Phenomena in Biological Systems: Fluid Dynamics of the Bird Wrasse Fish.** Considered the swimming motion of the bird wrasse fish and evaluated using mathematical models. Each model had a different set of assumptions based on if the analysis was steady, quasi-steady, or unsteady state. It was found that the model using unsteady state assumptions provided the most accurate analysis.
3. **MATLAB Simulation of the Board Game Blokus.** Developed a simulation of the board game Blokus to determine the best game strategy. Designed mathematical models for the game play strategies and used object-oriented programming to create the game board and pieces.

### **Publications**

1. **Pardi, Lauren.** “A Solar Solution: An Analysis of Solar Technology.” *Fresh Writing*, University of Notre Dame, 8 Aug. 2020, [freshwriting.nd.edu/volumes/2020/essays/a-solar-solution-an-analysis-of-solar-technology-7938cb8c-e3b2-4223-823d-797397f10e97](https://freshwriting.nd.edu/volumes/2020/essays/a-solar-solution-an-analysis-of-solar-technology-7938cb8c-e3b2-4223-823d-797397f10e97).

### **Skills**

- Programming Languages – Python, R, C++, MATLAB
- Modeling Software – ASPEN, CAD, SolidWorks