Sophie Lancaster

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EDUCATION

Northwestern University — Evanston, IL
Master of Science in Engineering Design Innovation — December 2020

University of Notre Dame — Notre Dame, IN
Major: Bachelor of Science in Computer Science — May 2019
Minor: Engineering Corporate Practice — GPA 3.64/4.00, **Honors:** Upsilon Pi Epsilon, Dean's List Spring 2018

Notre Dame London Program — London, England
Studied Integrated Business and Engineering and Sustainability — Summer 2016

The American International School of Rotterdam — Rotterdam, The Netherlands
International Baccalaureate Diploma Recipient — June 2015

INTERNSHIP AND RESEARCH

Verizon — Ashburn, Virginia
IT Data Analytics Intern — June 2018-August 2018
- Developed a more efficient pricing process by utilizing Python and Verizon's Enterprise data tools
- Automated the comparison of external invoices and internal billing data using Python screen scraping

National Science Foundation — Budapest, Hungary
Summer Researcher, International Research Experiences for Students (IRES) — May 2017-August 2017
- Researched machine learning and neural networks using TensorFlow and Python at the Pázmány Péter Catholic University under the leadership of András Horvath and Michael Niemier
- Collaborated with a research partner to investigate the implications of removing the fully connected layer from convolutional neural networks (CoNNs) and implementing locality-sensitive hashing in CoNNs

WORK EXPERIENCE

Department of Computer Science and Engineering — Notre Dame, IN
Teaching Assistant — August 2018-May 2019
- Performed academic tutoring, provided assistance to professor, and monitored assessments for CSE 20232 (C/C++ Programming) and CSE 30332 (Programming Paradigms)

Office of Outreach and Engagement Recruitment — Notre Dame, IN
NDignite Connection Program Assistant — August 2017-May 2019
- Assisted with NDignite Connection which is a leadership program aimed specifically at top-performing students in grades 7 and 8 by providing feedback to students and by helping to create the curriculum

McGlinn Hall — Notre Dame, IN
Hall Clerk — August 2016-May 2018
- Assisted hall rector in organizing hall emails and weekly news by using basic Microsoft Office applications

PROJECT EXPERIENCE

Department of Computer Science and Engineering — Notre Dame, IN
Human Computer Interaction, team member — January 2019-May 2019
- Developed a web application so that our target users could find recipes and plan meals more efficiently

Database Concepts, team member — August 2018-December 2018
- Created a web application so that students can get and make study abroad travel recommendations

Social Sensing, team member — January 2018-May 2018
- Generated a model that aggregates multiple types of data to predict the Best Picture winner of the Oscars using Python, the genetic algorithm and a random forest classifier

Theory of Computing, team member — January 2018-May 2018
- Constructed a grep application that matches strings including backreferences then shows that including backreferences makes this application NP-complete

Data Structures, team member — January 2017-May 2017

- Applied C++ and HTML to create a meal planner program that takes user input and creates a meal based on items offered in the dining hall allowing users to be more efficient and healthy when choosing meals

Fundamentals of Computing, team member August 2016-December 2016

- Employed C++ to create a version of the popular Piano Tiles game which created a fun outlet for users

The First Year of Studies *Notre Dame, IN*

First Year Engineering, team member August 2015-May 2016

- Utilized CREO program to model floating platform that had to sustain certain weight requirement
- Built robotic pet using Lego NXT kit and programmed robot with LabVIEW
- Designed a simulated version of the popular board game Clue using MATLAB

LEADERSHIP & ACTIVITIES

Girls Who Code Notre Dame, IN

Club Member August 2018-May 2019

- Taught girls at Penn High School how to code by guiding them through the creation of a Python chatbot

Society of Women Engineers (SWE) Notre Dame, IN

Tech Team Co-Leader August 2017-May 2018

- Partnered with the community of South Bend to bridge the digital divide by installing solar-powered WiFi pavilions in underserved areas of the city
- Led the tech team by presenting previous year's project at national SWE conference, filling out group paperwork, setting up meetings with industry partners, and facilitating teamwork at group meetings

Club Member August 2015-Present

- Participated in activities and events organized by this professional development organization which seeks to increase the importance of women in engineering

McGlinn Hall Notre Dame, IN

Hall Council Apparel Commissioner August 2017-May 2018

- Designed spirit apparel for residents in the dorm using online designing tools

Hall Council Multicultural Commissioner August 2016-May 2017

- Planned monthly events in the dorm to raise awareness about other cultures

First Year Engineering Council Notre Dame, IN

Club Member August 2015-May 2016

- Organized informative events for other first year engineers and engaged with engineering professors

Shamrock Leadership Series: First Year Institute Notre Dame, IN

Institute Member February 2015

- Attended a lecture series which sought to increase the leadership skills of first year students

The American International School of Rotterdam Rotterdam, The Netherlands

Student Body President August 2014-April 2015

- *Raised funds to organize school activities and functions including end of year prom*

SKILLS

Computer: Microsoft Office, Unix, C/C++, Python, TensorFlow, Scheme, Java, JavaScript, x86, PHP, HTML, SQL
Language: Sufficient in Spanish
Interests: Traveling, cooking, fitness, socializing, family time, music