

# CONOR MURPHY

[conor.p.murphy52@gmail.com](mailto:conor.p.murphy52@gmail.com) | 773 724 9888 | Chicago, IL | [Github](#) | [LinkedIn](#)

## EDUCATION

### University of Notre Dame

College of Engineering, B.S. Computer Science; GPA: 3.64

Notre Dame, IN

Aug. 2018 - May 2022

**Relevant Coursework:** Compilers and Language Design, Systems Programming, Databases, Data Structures, Algorithms

**In Progress:** Machine Learning, Web Development, Operating Systems

## SKILLS

• **Languages:** C, C++, Python, JavaScript, TypeScript, SQL, HTML/CSS

**Technologies:** Angular, Git, OOP, D3.js, Linux/Unix

## EXPERIENCE

### Zebra Technologies Corporation

Application Development Intern

Lincolnshire, IL

May-August 2021

- Participated in Agile development for a production search application on Zebra.com that will ship in fall 2021
- Owned search backend indexing using Apache Solr and Salesforce.com that enables discovery of over 10,000 3rd-party partners and application offerings

### Chaoli Wang Lab, University of Notre Dame

Data Visualization Researcher

Notre Dame, IN

August 2020-Present

- Utilized the D3.js Javascript library to build data visualization tools
- Developed [novel visualizations](#) to compare adding hierarchical and historical information to Sankey diagrams
- Co-authored [Hierarchical Sankey Diagram: Design and Evaluation](#). In *Proceedings of International Symposium on Visual Computing*, Oct 2021

### The Graduate School, University of Notre Dame

Graduate Enrollment Management Student Assistant

Notre Dame, IN

August 2019-May 2020

- Handled initial review of 2019-2020 application rounds
- Designed various materials for official communication to potential applicants

### Office of the Executive Director, Center for Social Concerns, University of Notre Dame

Student Administrative Assistant

Notre Dame, IN

September 2018-May 2019

- Gathered preliminary information relevant to upcoming research proposals
- Prepared marketing and organizational materials for the Center's internal
- Completed various administrative tasks under direction from the Executive Director/Executive Assistant

## PROJECTS

### playruski.com ([Github](#))

CSE 30246: Databases

Notre Dame, IN

February 2021-Present

- Developed a full-stack social app with fellow students using MongoDB, Express w/GraphQL, Angular, and Node.js (MEAN stack)
- Implemented various features for the web app by writing Angular components and services and custom GraphQL queries
- App currently has over 150 users

### B-Minor Compiler

CSE 40243: Compilers and Language Design

Notre Dame, IN

August-November 2020

- Built 4 stages of the compiler toolchain for a C-like language
- Implemented formal language theory concepts including regular expressions and context-free grammars for tokenizing and parsing input programs using Flex and GNU Bison to ensure correct grammar and syntax
- Wrote C code to produce consistently formatted representation of programs as well as verify that type assignments are correct and the program can be represented with valid assembly code

### Spidey.c Webserver

CSE 20289: Systems Programming

Notre Dame, IN

April-May 2020

- Worked with one other student to build an HTTP 1.0 webserver in C that can accept traffic in single or forking mode
- Functionality includes serving/traversing directory listings, displaying images and txt files, and running bash/Python CGI scripts
- Utilized an AWS instance to run the server permanently and accept global traffic

### CrossReference ([Github](#))

Personal Project

Chicago, IL

March 2020

- Developed a Python CLI tool to cross reference films on Letterboxd watchlists with preferred streaming services
- Gained experience in using Python libraries to perform webscraping and making API requests

### MATLAB Battleship AI ([Github](#))

EG10112: Intro to Engineering II

Notre Dame, IN

Spring 2019

- Worked with a student team to develop attack algorithms for the board game Battleship in MATLAB
- Implemented comprehensive GUI to allow users to run tests of each algorithm and visualize results over hundreds of games at once, as well as visually represent a full game in realtime with each algorithm