CONOR MURPHY

conor.p.murphy52@gmail.com | 773 724 9888 | Chicago, IL | GitHub | LinkedIn

EDUCATION

University of Notre Dame — Notre Dame, IN

College of Engineering, B.S. Computer Science; GPA: 3.64 — *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:** React, Angular, Git, OOP, D3.js, Linux/Unix

EXPERIENCE

Zebra Technologies Corporation — Lincolnshire, IL

Application Development Intern — *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 — Notre Dame, IN

Deep Learning and Data Visualization Researcher — *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
- Building deep learning models using GANs to predict high quality images from alternative viewpoints for 3-dimensional scientific simulations

The Graduate School, University of Notre Dame — Notre Dame, IN

Graduate Enrollment Management Student Assistant — *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 — Notre Dame, IN

Student Administrative Assistant — *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) — Notre Dame, IN

CSE 30246:Databases — *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 — Notre Dame, IN

CSE 40243: Compilers and Language Design — *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 — Notre Dame, IN

CSE 20289: Systems Programming — *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) — Chicago, IL

Personal Project — *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) — Notre Dame, IN

EG10112: Into to Engineering II — *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