

Patrick Kelly

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Education

Purdue University

West Lafayette, Indiana

BACHELOR OF SCIENCE IN COMPUTER SCIENCE, BACHELOR OF SCIENCE IN MATHEMATICS

May 2022

- GPA: 3.91/4.00
- Relevant Mathematics Coursework: Linear Algebra, Real Analysis, Ordinary Differential Equations, Statistical Methods
- Relevant CS Coursework: Algorithms and Data Structures, Numerical Methods, Systems Programming, Analysis of Algorithms

Skills

Programming Languages Proficient in Python, Java, and C. Familiar with C++, Bash, MATLAB, PHP, Assembly (x86_64), and SQL

Markup Languages \LaTeX , HTML, and CSS

Miscellaneous Linux, Drupal 7/8, Breadboarding, OpenQASM, and Qiskit

Work Experience

Jung Research Group

West Lafayette, Indiana

UNDERGRADUATE RESEARCHER

January 2020 - Present

- Implemented algorithms leveraging quantum phenomena using OpenQASM and Qiskit to efficiently solve problems in high-energy physics, chemistry, and engineering
- Performed data analysis and reduced noise from quantum computer output distributions with CERN's ROOT, a computational physics software package

Ivyhill Technologies

New Providence, New Jersey

JUNIOR DEVELOPER

February - July 2018

- Designed a responsive website connecting student athletes to collegiate recruiters based on Drupal 7 & 8
- Created PHP extension for tighter integration with MySQL database

INTERNING SECURITY RESEARCHER

May - June 2017

- Designed a security scoring algorithm that assesses an organization's overall security
- Presented algorithm to high school at completion of internship

Projects

DiscoTrader

INTERACTIVE BOT FOR STOCK TRADING FROM WITHIN DISCORD

- A Discord bot that allows users to seamlessly retrieve market information and submit orders
- Implemented in Python with the discord.py API and Alpaca's paper trading API

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REDDIT ARCHIVER

- An archiving application to automatically scrape, download, and collect comments from Reddit
- Written in Python using the PRAW API
- Frontend dashboard built with Flask for user-friendly operation

Involvement

Purdue Disability Resource Center Peer Mentor Program

West Lafayette, Indiana

SENIOR MENTOR

June 2020 - Present

- Interviewed and trained new mentors on how to be an effective mentor
- Developed training materials relevant to disabilities and the Disability Resource Center's objectives
- Assisted in organizing and executing over a dozen program-wide events

MENTOR

August 2019 - May 2020

- Worked individually with mentee to more effectively utilize academic, social, and clinical services offered by the university
- Met on a bi-weekly basis to check in and discuss potential access roadblocks and solutions

Honors & Awards

- 2020 **Discovery Park Undergraduate Research Fellowship**, Recipient
- 2020 **Computer Science Departmental Scholarship**, Recipient
- 2018 **Purdue University Presidential Scholarship**, Recipient