

Patrick Cunningham

510 North Catherine Avenue, La Grange Park, IL | 331-262-3641 | patrickmcunnin@gmail.com

EDUCATION

University of Illinois at Urbana-Champaign

May 2025

Bachelor of Science in Computer Science

GPA: 4.0/4.0

- James Scholar, Dean's List Fall 2021, Dean's List Spring 2022, Dean's List Fall 2022
- Relevant Coursework: Discrete Structures, Data Structures, Linear Algebra, Probability & Statistics for Computer Science

EXPERIENCE

Undergraduate Research Apprenticeship Program

November 2021 – May 2022

Subsonic Wind Tunnel

- Led a group of 8 students alongside a Ph.D. mentor to design and engineer a model scale wind tunnel
- Performed data analysis and visualization of Excel spreadsheets containing over 3 million data points using Python libraries including NumPy and pandas

Inverted Pendulum Control Experiment

- Collaborated with a group of 10 students and a Ph.D. mentor to design and engineer an inverted pendulum
- Worked with the CAD sub-team to design and model various parts of the inverted pendulum system using Fusion 360 software

Course Staff

August 2022 – Present

CS124 Course Assistant

- Teach students the basics of Java for 5+ hours a week on course help site while expanding my communication, problem-solving and organizational abilities
- Record daily walkthrough videos, proctored weekly quizzes and study sessions

Wheaton Park District

April 2021 – August 2022

Assistant Manager

- Instructed over 50 lifeguards in lifesaving skills such as CPR, first-aid, and artificial respiration
- Created bi-weekly schedules, led weekly in-service training, and ensured aquatics staff performed at a high level to maintain a safe pool environment

PROJECT HIGHLIGHTS

Machine Learning Mobile App

August 2022 – December 2022

Personal Project

- Created a mobile application that scanned a user's pantry using a machine learning model and generated corresponding recipes the user could cook
- Used Node.js and MongoDB to create a streamlined backend server that handled recipe filtration, image processing, and general front-end GET/POST requests

Automated Criminal Record Summary

November 2021 – December 2021

Personal Project

- Analyzed and extracted data from 154 criminal record reports to analyze and extract data to create a criminal record summary using Microsoft Excel Python, PyPDF2, and xlwt.
- Developed knowledge in debugging, algorithm efficiency, and data processing through basic language analysis

Automated Scheduling Software

June 2022 – August 2022

Wheaton Park District

- Automated scheduling system for aquatics staff of over 100 employees using Google Sheets and Google Forms
- Reduced total time spent scheduling by 20+ hours leading to a more productive aquatics staff
- Implemented invaluable skills in product management, client communication, and user experience

ACTIVITIES

Theta Tau

February 2022 – Present

Active Member

- Selected as one of 18 from a pool of 300+ candidates to complete the Spring 2022 pledge process
- Raised over 500 dollars for the Champaign-Urbana community through 3 fundraising projects

SKILLS

- Technical: Python, Java, C++, Node.js, React Native, Autodesk Fusion