

Nicholas Hsu

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EDUCATION

Northwestern University

Bachelor of Science in Computer Engineering, GPA: 3.93/4.00, Dean's List

- Relevant Coursework: C/C++ Programming, Introduction to Computer Engineering
 - Programming Languages: Python, C, C++, MATLAB, Racket
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Evanston, IL

Expected June 2024

RELEVANT EXPERIENCE

GlobalFoundries

Automation and Robotics Intern

Essex Junction, VT

June 2022 – August 2022

- Developed and integrated standardized emergency eye wash station inspections into missions using Spot robot through Python programming and Boston Dynamics API. Composed a training manual for developers working with the robot.
- Designed Spot robot demonstrations incorporating autonomous pick-and-place created through training and evaluating a machine learning model with the TensorFlow object detection API, NumPy, and Pandas.
- Verified robot capabilities within the sub-fabrication environment by designing a testing methodology to document and evaluate 120 different blockage and interference types, with the employment of CAD maps in SOLIDWORKS and Excel.
- Evaluated pumps, blowers, and other apparatus in the sub-fabrication environment. Updated internal safety documents and robot user interaction training to better reflect potential concerns.
- Assisted in creation and execution of preventative maintenance plan for Omron mobile robots located in the fabrication plant.

Telamon Robotics

Robotics Intern

Carmel, IN

May 2021 – September 2021

- Led design and programming of cobot demonstrations incorporating pick-and-place, palletization, visual servoing, machine tending, and object quality inspections using Techman collaborative robots and OnRobot grippers. Developed multiple projects in RoboDK involving laser cutting, pick-and-place, and quality inspection.
- Aided in construction of 6 educational cobot workstations, a machine tending cobot stand, and an industrial tape dispenser and cutting machine.

Design Thinking and Communication

Client: Shirley Ryan AbilityLab

Evanston, IL

September 2021 – December 2021

- Designed an adaptive fishing rod support device to allow patients with hemiplegia to return to fishing by assisting in casting and reeling process, awarded Best Design at Design Thinking and Communication Fair.
 - Coordinated team meetings to organize timely realization of deadlines, oversaw selection and purchase of materials, and directed construction of adaptive device. Managed and wrote instructions for use, instructions for construction, and final report for adaptive device, as well as presented design to client.
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ACTIVITIES & LEADERSHIP

Northwestern University Residential Services

Residential Assistant

Evanston, IL

September 2022 – Present

- Led regular events at Ayers Residential College of Commerce and Industry, mentored incoming first-year students, and facilitated positive interactions between peers.

Northwestern University Financial Technologies Club

Core Developer

Evanston, IL

September 2021– Present

- Developed Python scripts to generate time series data regarding server health metrics with Git version control.
 - Analyzed data collected versus time and integrated a crisis notification system using Slack and custom bots.
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PROJECTS

2048++ | C++, UNIX Shell

September 2022 – Present

- Constructed 2048 game from scratch in C++ development environment using subset engine of SDL2.
 - Built user-interactive GUI using Model-View-Controller architectural pattern to enable player-driven gameplay.
 - Designed game system with custom sprites and event handlers, as well as deployed conclusive unit-testing
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INTERESTS & SKILLS

Skills: Fluent in English and Mandarin Chinese, Microsoft Office Suite

Societies: Eta Kappa Nu, IEEE, Taiwanese American Students Association, Philharmonia Orchestra

Interests: Semiconductors, Basketball, CS:GO, Weightlifting, Skiing, Food (Eating), Violin