Cooper Murr

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EDUCATION

Cornell University, College of Arts & Sciences **Ithaca, NY**
Bachelor of Arts - Computer Science, Mathematics *Expected Graduation: May 2024*
GPA: 3.733 • *Dean's List Fall 2020, Spring 2020, Fall 2021, Spring 2021*
Related Coursework - Data Structures Honors • Discrete Structures • Machine Learning • Computer Graphics • Functional Programming • Computer System Organization • Operating Systems • Complex Analysis • Game Architecture • Basic Probability

TECHNICAL SKILLS

Programming Languages: Java, Kotlin, Typescript, Python, OCaml, JavaScript, C++, C#, HTML, CSS
Libraries/Frameworks: React, React Native, Git, Spring, Spring Boot, RESTful, OpenAPI, MyBatis, OpenAI, node-RED
Other: GitHub Actions, Azure App Insights & Services, AWS Amplify, RISC-V Assembly, Linux CLI, Postman, Mermaid

WORK EXPERIENCE & ACADEMIC PROJECTS

Dick's Sporting Goods - Innovation Team **Pittsburgh, PA**
Software Engineering Intern *June 2023-Present*
- Contributed to in-store applications, 'Bat Genie' and 'Cleat Wizard', using Agile development methodology.
- Conceived 'Klimbing Kiosk', a React-Native application providing climbing information to customers at the Public Lands store using Azure App Insights to gather customer interaction data.
- Collaborated in a team of 5 interns for hackathon to design and develop 'Backpack Expert', an AI-driven chat bot powered by ChatGPT API. The bot provided personalized backpack recommendations, contributing to a customer-centric approach.

Future Automation Research Laboratory **New York, NY**
Research Intern *May 2022-Present*
- Prototyped audio machine learning & robotics interface/backend for development of contextualized learning systems.
- Initialized Python/Javascript enabled I2C interface for microphone array and servo motor communication to let user ML model's take in input and manipulate environment.
- Orchestrated technical equipment for operating the Immersive XR Bus Tour and contributed to its in progress research paper.
- Conduct studies for the Ithaca Cross Cultural Driving Project using Virtual Reality to collect data on driver behavior for self-driving systems.

Grow Crazy! (Commercial Video Game, Cornell University) **Ithaca, NY**
Programmer *January 2022-May 2022*
- Developed a Java based title that contains full co-op support, over 20 levels, and a unique gameplay experience against an AI controlled plant.
- Organized weekly meetings, outlining following week's programming tasks and iterating essential game design elements.
- Presented at end-of-year game exposition to 500+ attendees including professionals, professors, and peers.

Intro to Python Computing Course Staff (Cornell Bowers CIS Department) **Ithaca, NY**
Consultant *August 2021-May 2022*
- Headed a section of weekly consulting hours for Intro to Python assignment & exam questions
- Ensured students in the weekly lab section understood the week's relevant python concepts.

PERSONAL PROJECTS & ACTIVITIES

The ShadeBot Project **New York, NY**
Personal Project *May 2022-Present*
- Built Python system for analyzing real time user line drawings and using the AxiDraw to realistically sketch shading on top of them from a given lighting direction (ShadeSketch ML model).
- Study the effects of translating a digital machine learning model's inputs and outputs to physical space to expand model's use cases in future development.
- Draft in progress research paper on effects of translating digital ML models to physical space and submit to UIST 2023 and DIS 2023 conferences.

Cornell University Sustainable Design (ICN 2030 Modeling) **Ithaca, NY**
Electrification Team Lead *August 2021-January 2023*
- Researched and analyzed residential features, collaboratively utilizing Rhino & TensorFlow to build ML model to determine optimal retrofittings to cost effectively reduce impact on the environment and make Ithaca Carbon Neutral by 2030.
- Lead development of the ICN 2030 modeling React site for residential distribution of model's algorithm functionality.
- Delineated complex ML concepts at weekly meetings to architect team members for cooperative development of model.

Whistling Shrimp Improvisational Comedy **Ithaca, NY**
Director *August 2020-Present*
- Secure venues, design adverts, and promote performances for auditions and self/client-produced shows.
- Opened for University of Delaware & Skidmore College Comedy Festivals respectively, performing improvisational comedy to 400+ attendees.