

SPENCER NG

New Jersey · spencerng@uchicago.edu · github.com/spencerng

EDUCATION

The University of Chicago

BA Computer Science, Minor in Theater & Performance Studies

GPA: 3.98 | Activities: University Theater, Magic (performing arts), Science Olympiad

Coursework: Intro to Computer Systems, Discrete Math, Intro to Human-Computer Interaction (Fall 2020)

Chicago, IL

Expected June 2023

EXPERIENCE

Argonne National Laboratory

Research Intern

Lemont, IL

June 2020 - Present

- Creating deep learning models with YOLO and PyTorch to extract environment features from images
- Developing a Dockerized Python pipeline to continuously run inference on video feeds at the edge, determining the best frames to sample for retraining ML models with improved performance

University of Chicago IT Services

Network Architect Developer

Chicago, IL

Oct. 2019 - Present

- Automating University network switch setup and maintenance by writing Python and Perl scripts
- Created a Python tool to lookup campus buildings, determine their real-time device statuses via ping, and backup/sync building and device data between Netbox, Box, and local server storage

University of Chicago Laboratory Schools

Metcalf Intern

Chicago, IL

Apr. 2020 - June 2020

- Created dashboard visualizations of Schoology, Seesaw, Google Meet, and Zoom data with Tableau
- Analyzed online learning trends and compared platform usage across various courses and departments

New Jersey Institute of Technology

Neural Engineering Research Intern

Newark, NJ

June 2019 - Sep. 2019

- Developed a Unity game with C# to diagnose patients for hearing disabilities
- Created real-time algorithms to simulate pitch shifting and sound localization

SKILLS

Languages: *Proficient:* Python, C, Java, C++ *Familiar:* JavaScript, R, C#, HTML, CSS, Haskell
Libraries: Android, PyTorch, Pandas, OpenCV, REST APIs, Google Cloud, Qt, .NET, Unity
Tools: Git/GitHub, JSON, Gradle, GitLab/Travis CI, Unix/Linux, Tableau, Adobe Creative Suite

TEAM PROJECTS & ACTIVITIES

University Theater

Co-Social Chair & Stage Manager

Chicago, IL

Oct. 2019 - Present

- Schedule rehearsals, manage stage props, and create inclusive rehearsal rooms for companies of 25+
- Plan social events for an organization with 100+ members and support 30+ annual performances

Hackathons

PennApps Campus Ambassador

Philadelphia, PA & Remote

Sep. 2015 - Present

- Developed RecycleMe, an Android app to detect and classify recyclable items and find nearby recycling centers with the Google Vision API, Google Maps API, and Earth911 search
- Built Synaptic Gestures (PennApps XVII Top 30 Hack of ~1.2k attendees), an Electron app to increase user productivity by building custom gestures for Synaptic touchpads with AutoHotkey

Raider Robotix

Strategy & Scouting Team Lead

North Brunswick, NJ

Sep. 2015 - June 2019

- Developed an Android app and a JavaFX desktop client for real-time collection and statistical analysis of robotics match data, incorporating a novel match prediction model with 85% accuracy
- Implemented Travis CI Java pipeline, led programming team, and performed code reviews

Laundry Manager and Optimizer

Philadelphia, PA & Edison, NJ

- Built an Android prototype (PennApps XVIII Top 30 Hack) to recognize laundry tag symbols on clothing using custom machine learning models trained with Google's AutoML Vision API
- Designed a touchscreen IoT hamper with Raspberry Pi, 3D-printed parts, and PyQt to detect hamper contents and optimize laundry loads and energy use based on deposited clothes