Spencer Ng

North Brunswick, NJ | spencerng@uchicago.edu | (732) 501-6949

EDUCATION

UNIVERSITY OF CHICAGO
BS in Computer Science
Chicago, IL | Expected June 2023

MIDDLESEX COUNTY ACADEMY
Electrical & Computer Engineering major
Edison, NJ | Sept. 2015 - June 2019
Valedictorian of the Class of 2019
Cumulative GPA: 4.68

SKILLS

LANGUAGES
Proficient:
Java • Python • C++ • LaTeX
English • Cantonese
Familiar:
JavaScript • HTML • CSS • C#
Assembly • MATLAB • Arduino

LIBRARIES & FRAMEWORKS
Android • REST APIs • OpenCV
.NET • Unity Engine • ROS • Qt
Google Cloud APIs • JSoup • and more...

TOOLS
Git • GitHub • Multisim • Gradle
Travis CI•Photoshop • Premier Pro
After Effects • Microsoft Office • Tableau

COURSEWORK

UNDERGRADUATE
Honors Introduction to Computer Science
Multiscale Modeling of Biological Systems
OTHER
Digital Electronics
Assembly & Microcontrollers
Object-Oriented Programming in C++
Linear Algebra
Discrete Math

HONORS

Top 10%, NJ Physics & Environmental Sci.
AP Scholar with Distinction
Top 20%, Math Modeling Challenge
Central NJ ARML Team Captain

LINKS

GitHub.com/spencerng
LinkedIn.com/in/spencer-ng
Devpost.com/spencerng

TEAM PROJECTS

AUDIQ | Research Intern
Newark, NJ | June 2019 - Present
- Developing Unity game to easily diagnose hearing disabilities by testing patients' aptitude for sound localization and pitch discrimination
- Research project at NJIT's Neural Engineering of Speech and Hearing Lab

HACKATHONS | PennApps Campus Ambassador
Philadelphia, PA | Sept. 2016 - Present
- Increased the Academy's participation in hackathons from ~10 people to 30+
- Participated in 6 PennApps to create software solutions to real-world problems, placing in the Top 30 of ~1.2k attendees twice
- RecycleMe: Android app to detect nearby recycle centers for items with the Google Vision API, Google Maps API, and Earth911 search
- Synaptic Gestures: Electron app to increase productivity on old laptops by creating new gestures for Synaptic touchpad with AutoHotkey

RAIDER ROBOTIX | Strategy & Scouting Team Lead
North Brunswick, NJ | Sept. 2015 - June 2019
- Led and evaluated 35+ scouts on FIRST Robotics Competition games
- Managed, taught, and performed code reviews for the programming team
- Mentored elementary school students to strategically design, build, and program LEGO Mindstorms robots to complete a mentor-designed challenge
- Developed an Android app and a Java FX desktop client with 100+ downloads to collect and analyze match data
- Used Tableau to create data visualizations and formulate competition strategy
- Built a Java library wrapper for The Blue Alliance API
- FIRST Mid-Atlantic Mount Olive (2017 & 2018), Montgomery (2017 & 2018), and Hatboro-Horsham (2018) District Event Winners

LAUNDRY MANAGER AND OPTIMIZER
Philadelphia, PA & Edison, NJ | Sept. 2018 - May 2019
- Built a prototype Android app to recognize laundry tag symbols using models trained with Google's AutoML Vision API
- Designed an IoT hamper with Raspberry Pi and PyQt that allows users to optimize laundry loads and energy use based on deposited clothes

MIT BEAVER WORKS UNMANNED AERIAL VEHICLE RACING
Cambridge, MA | Summer 2018
- Developed localization, vision, and control algorithms with OpenCV and ROS
- Navigated Intel drones autonomously without use of motion-capture or GPS

EXPERIENCES

MAGIC (PERFORMING ARTS) | Performer & Instructor
New Jersey | Oct. 2015 - Present
- Developed and teaching a 20-week sleight-of-hand magic class to children 8+
- Perform (volunteer and freelance) at community events and birthday parties

CHINESE HERITAGE SCHOOL OF NJ | Teacher Assistant
South Brunswick, NJ | Sept. 2017 - June 2019
- Facilitated student learning and evaluation (speaking and writing Chinese)
- Created classroom activities and promotional videos for the school
- Oversaw logistics and annual productions as Stage Manager