

Spencer Ng

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SUMMARY

Highly-motivated software developer with an aptitude for problem-solving, excellent public speaking skills, and diverse leadership experiences.

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

COURSEWORK

DC & AC Circuit Analysis

Digital Electronics

Assembly & Microcontrollers

Object-Oriented Programming in C++

Linear Algebra • Discrete Math

SKILLS

LANGUAGES

Proficient:

Java • Python • C++ • \LaTeX

English • Cantonese

Familiar:

JavaScript • HTML • CSS • C#

Assembly • MATLAB • Lua • Arduino

LIBRARIES & FRAMEWORKS

Android • REST APIs • OpenCV

.NET • Materialize • ROS • and more...

TOOLS

Git • GitHub • Multisim • Gradle

Travis CI • Photoshop • Premier Pro

After Effects • Microsoft Office • MkDocs

HONORS

Top 10%, NJ Physics & Environmental Sci.

National & Spanish Honor Societies

AP Scholar with Distinction

Commended, National Merit Scholar

Top 20%, Math Modeling Challenge

Honorable Mention, MathCON Finals

Medalist, Science Olympiad UCC Regional

TEAM PROJECTS

AUDIQ

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

- Participate in contests to create software solutions to real-world problems
- Promote PennApps and other hackathons, doubling the Academy's participation (~10 to 25+)
- Synaptic Gestures (PennApps XVII Top 30 Hack): User-friendly Electron app to increase productivity by creating new laptop touchpad gestures

RAIDER ROBOTIX | STRATEGY & SCOUTING TEAM LEAD

North Brunswick, NJ | Sept. 2015 - June 2019

- Lead and evaluate 35+ scouts on FIRST Robotics Competition games
- Manage, teach, and perform code reviews for the software development team
- Train future leaders of the Strategy & Scouting Team
- Mentor elementary school students to strategically design, build, and program LEGO Mindstorms robots to complete a mentor-designed challenge
- Developed a Bluetooth-based Android app and a Java desktop client to collect and analyze match data, sent to Tableau for visualization
- 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
- FIRST Mid-Atlantic District Championship Finalists, 2016 & 2018

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 (PennApps XVIII Top 30 Hack)
- Designed an IoT hamper with Raspberry Pi that allows families and college students 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 Python 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

- Facilitate student learning and evaluation (speaking, reading, writing Chinese)
- Create classroom activities and promotional videos for the school
- Oversee logistics and annual productions as Stage Manager