Ryan Newkirk

https://x-ry.github.io/
rnewkirk@cps.edu

Education

Whitney M Young Magnet High School Graduating June 2020

Coursework

Notable	Favorites
AP Computer Science	AP CS
AP English & Comp	H Business
AP Physics 1,2	Number Theory
Math through AP Calc BC	Mechatronics

Skills

Programming Languages
Java, Processing, HTML/CSS (and various abstractions), Javascript, SQL, Haskell.

JavaScript/Web Development
React, Node, Jekyll, Github Pages

Technologies
Mac & Windows systems, Arduino, Teensy, 3D Printing, CAD

Design & Graphics Software
Final Cut Pro, Adam Premier & Photoshop, Autodesk TINKERCAD

Awards

2016 Broadcom National Science Competition Broadcom MASTERS Nominee

Chicago's Youth Math Symposium QED
2015, 2016 Highly Distinguished Mathematics Research Award.

Business Professionals of America 2019
JAVA Programming
- Chicago City Competition, 1st Place
- State Competition, 3rd Place
- National Competition Qualifier

2018 Congress of Future Science and Technology Leaders Award of Excellence

Interests

Activities & Work

Whitney Young Mobile App Inventor Club
2017 - Present
President and Founder
Started this club as a freshman to gather students with or without coding experience to learn how to create mobile apps and build computational thinking skills. Work includes organizing weekly club meets, leading design, discussing code, and teaching new member basic app development skills. Built S-Mart prototype, a student resource sharing app to help students get easy access to school supplies, textbooks, and information. Built WY School Club App, and developed a website (https://x-ry.github.io/wyclub/) to host information for over 130 school clubs.

FIRST Robotics
2015 - Present
Team Member
Participated in First Lego League teams "Seismic Squad" in 2014 and "Lego Fire" in 2015. Participated in First Tech Challenge team "Robophins" from 2017-2019. Programmed robots using Android Studio, acquired skills in mechanical engineering, electrical engineering, and circuitry. Wrote and maintained an Engineering Notebook. Participated in team fundraising activities. 4-time winner of Chicago Regional Championships. World Competition Qualifier.

Whitney Young Math Team
2016 - Present
4 years in a competitive math league. City of Chicago Math League, 1st place team for 4 years. North Suburban Mathematics League of Illinois, 3rd place team for 3 years. Illinois Council of Teachers of Mathematics, Top 3 team in state competitions for 3 years. 2019 AIME (AMC 12) Qualifier. Created math videos, 4-time CCML video contest winner and Overall 2019 video contest team winner.

Foreign Student Teacher in Chengdu, China
Summer 2017
Attended Fenghua Academy's Youth Leadership Development Program, as a volunteer, taught younger Chinese students English and organizing culture exchange activities.

UChicago Young Scholar Programs
Summer 2015, 2016, 2018
Attended University of Chicago Math department summer program for three years, studying Number Theory, Geometry and broadening my understanding of math. Designed the YSP 2018 Summer Camp T-shirt based on the Markov model.

Northwestern CTD Summer Program: Mechatronics
Aug 2018
Took mechatronics to learn electromechanical design and prototyping. Built circuits and robots from scratch, using low-level electrical components, laser cutting and 3D printing mechanical parts built an autonomous vehicle: a smart shopping cart. Wrote code to read the sensors and control the actuators.

ChiHackNight: Chicago Virtual Assistant Project
2018 - Present
A regular at ChiHackNight, a weekly event for Chicago coders to get together build, shared and learned about civic tech. The last project I worked on was building a Chicago Virtual Assistant; a voice-controlled 311-request system.

National Honor Society / National Junior Honor Society
2016 - Present
Took on service roles to support our school and community. Volunteered in several Chicago Marathons, at the Great Chicago Food Depository, and several school/community events. Completed over 180 hours of volunteer service over 4 years in high school.

Free Geek Chicago Technician
2018 - Present
Helped dismantle computers and refurbish parts to create brand new computers for low-income families.

Business Professional of America
2018 - Present
Focused on building information technology skills and applying Java knowledge to business-related problems, while developing leadership skills and an academic understanding of microeconomics and macroeconomics. 1st place at the Chicago Citywide Competition, 3rd place at State Competition, 25th place at National Competition.

Congress of Future Science and Technology Leaders
June 2018
Represented Whitney Young & Illinois at the Congress of Future Science and Technology Leaders. Won the 2019 Congress of Future Science and Technology Leaders Award of Excellence and received a letter of recognition from the Governor of Illinois.

Michigan Institute For Data Science Summer Camp
June 2019
Explored Data Science through Nature, Art, Athletics, and Autonomous Vehicles. Learned to teach our computer to distinguish data sets using many tools; JuliaBox, Jupyter Notebooks, Oculus VR Headset.

UIUC: Illini Summer Academies
Summer 2018
Explored Electrical and Computer Engineering, Mechanical Engineering through hands-on activities.

UIUC: Worldwide Youth in Science and Engineering Program
July 2019

Northwestern College Bridge Program
July 2019