

Ryan Newkirk

For the love of learning, please keep feeding my curiosity

Education

Whitney M Young Magnet High School

Graduating June 2020

Coursework

Notable

AP Computer Science
AP English & Comp
AP Physics 1,2
Math through AP Calc

Favorites

AP CS, Physic
H Business
Number Theory
Mechatronics

Skills

Programming Languages

Java, Python, Processing, HTML/CSS (and various abstractions), Javascript, SQL, MongoDB, GraphQL, Ruby, Haskell.

JavaScript/Web Development

React, Node, GraphQL, Express, D3.js, Plot.ly, Jekyll, Github Pages

Technologies

PC Hardware, Windows systems, Git, OracleSQL, Raspberry Pi, Arduino, 3D-Printing, CNC Milling, CMS & SEO, CAD

Design & Graphics Software

Final Cut Pro, Adobe CC Suite, Affinity Designer, Autodesk Inventor, Autodesk Fusion 360, OsciMusic, Simplify3D

Awards

2018 Congress of Future Science and Technology Leaders Award of Excellence

2016 Broadcom National Science Competition Broadcom MASTERS nominee

Chicago's Youth Math symposium QED 2015

Algebra 1(Fr.)	1st Place
Geometry (Soph.)	1st Place
Video Contest (Fr/Soph.)	2nd Place

Activities & Work

Whitney Young Mobile App Inventor Club

2017 – Present

Founded 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. School club app, student resource sharing app are all built with helping students' life in mind.

FIRST Robotics

2015 – Present

Participate in the "Robophins" FLL/FTC Team. Created a robot capable of performing multiple tasks. Won multiple team awards. Increased school awareness of Robotics. Participated in FIRST Lego League with the "Seismic Squad" and "Lego Fire" teams, building Lego Robots, learning Core Values, and coming up with and presenting solutions to real life problems.

Whitney Young Math Team

Spring 2016 – Present

Participated in WY math team for three years. Attended CCML and NSML, winning numerous individual awards and three-time team first placed.

Foreign Student Teacher Chengdu, China

Summer 2017

Taught Chinese middle school students English and American culture. Learned Chinese and the diverse culture in China.

UChicago Young Scholar Programs

Summer 2015, 2016, 2018

Attended YSP for three years, learning topics surrounding Number Theory and Geometry and broadening my understanding of math.

Northwestern Center for Talent Development 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 my first autonomous vehicles: a smart shopping cart. Wrote code to read the sensors and control the actuators.

Civic Tech: Chicago Virtual Assistant Project

2018-Present

A regular at Chihacknight, a weekly event for Chicago coders to get together build, share and learn 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. Completed over 150 hours of volunteer service during 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 family.

Interests



Tools



Chess



Riding



Piano



Film



Badminton



Cycling



3D Printing

