

Zane Alpher

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EDUCATION

University of Virginia

Charlottesville, VA

Intended Bachelor of Science in Computer Science

Class of 2021

- **Courses:** Software Dev Methods, Differential Equations, Multivariable Calculus, Physics E&M

Maret School

Washington, DC

High School

Class of 2017

- **Courses:** BC Calculus, Linear Algebra, AP Computer Science A, Physics C: Mechanics

WORK & LEADERSHIP EXPERIENCE

National Institute of Standards and Technology (NIST)

Gaithersburg, MD

Intern, Multimodal Information Group

July 2016 – Aug 2016

- Helped to clean and organize traffic data for use in the group's pilot data science evaluation.
- Created an algorithm to match video segments from traffic cameras to specific traffic incidents from millions of police records.
- Gained proficiency in R and ggplot2.

Maret Engineering Team

Washington, DC

CEO, Lead Software Engineer, Programmer

Sept 2013 – June 2017

- Designed and built an underwater remotely operated vehicle (ROV) to compete in the annual MATE competition (<https://www.marinetech.org/rov-competition-2>).
- During my year as CEO, the team finished in fifth place out of 25 teams, including receiving an award for the best presentation, which I organized and led.
- Wrote the code to communicate between the Mac, Xbox controller and on-board Arduino over serial using Processing and C.

Maret Math Team

Washington, DC

Co-Captain

Sept 2016 – June 2017

- Competed in the Arete math competition against other schools across the country (https://aretelabs.com/math_madness) and led club as we explored various math topics.
- Led the Maret team to its first winning season.

Cleveland Park Valet, Dry Cleaner

Washington, DC

Counterperson

June 2015 – Aug 2017

- Handled incoming dry cleaning and pickup.
- Handled register and made duplicate door keys for customers.
- Opened and closed store when owner unavailable.

SKILLS & ACTIVITIES

Software: Java, C++, Python, R, Processing, C, Matlab, MS Excel and Mathematica

Activities: Virginia Men's Rowing, HS Varsity Soccer and Lacrosse

Honors: Top AMC score at Maret for two years (<https://www.maa.org/math-competitions/amc-1012>), US Physics Olympiad Semi-finalist (<https://www.aapt.org/physicsteam/2018>)