

Education **High School**

Took Discrete Math, Numerical Analysis, Algorithms at Ursinus College

MIT

Freshman (class of 2021)

Considering a major in 6.2 (EECS)

Research **Ursinus College, with Dr. Akshaye Dhawan**

Co-published a paper with Dr. Akshaye Dhawan (Ursinus College)

Research was about finding small connected dominating sets of graphs

MIT PRIMES-USA and Regeneron STS, with Dr. Alex Townsend

Helped develop a new method of numerically solving PDEs

The new method is more efficient for high polynomial degree approximation

Wrote a CFD simulation that works for Reynolds numbers $Re \approx 1600$

Research won 2nd place nationally in the Regeneron Science Talent Search

I plan on submitting a paper for publication by the end of January

Experience **Programming**

Fluent in C++, Julia, MATLAB, Python, LaTeX

Worked on long-term projects (PDE research was largely writing Julia/MATLAB code)

PDE research also involves multithreading

Experience reading technical math and CS papers

I use Linux (Arch)

Hobbies

I built a quadcopter and programmed an Arduino to do stabilization

Also wrote a Python script to simulate the quadcopter and tune PID coefficients

Helped teach a Splash class (at MIT) about PID control

Employment **Summer job**

I taught sailing to children and adults at the MDI Community Sailing Center

I also did boat repair, customer service, and occasional IT work

VideoRay Internship

Worked for VideoRay for six weeks

Worked on programming an Arduino to do motor control

Also worked on testing underwater cameras and Ethernet connections

References

Akshaye Dhawan (adhawan@ursinus.edu)

Alex Townsend (townsend@cornell.edu)