

# Abhay Mathur

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Alexandria, VA

## Skills:

**Programming (Python, Java, Matlab)**

**3D modeling (Fusion 360, Solidworks)**

**AI and Machine Learning (Tensorflow)**

## Certificates:

**Neural Networks and Deep Learning**

**Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization**

**Structuring Machine Learning Projects**

**Convolutional Neural Network Sequence Models**

## Education:

St. Stephen's and St. Agnes School  
Alexandria

Expected graduation 2023

**10th grade GPA: 4.0 unweighted**

## Classes taken or taking:

AP Computer Science  
Pre-Calculus Honors  
AP Statistics  
AP Chemistry  
Intro to Engineering  
Robotics III  
Honors Biology  
Physics  
Chinese IV Honors

## Projects:

### Model rockets:

- Design in CAD then 3D Print and launch
- Integrated electronics like a microcontroller, altimeter, and gyroscope

### Programmed Rubik's cube solving algorithm:

- Designed Rubik's cube solver using C.F.O.P method
- Solves 1000 cubes in 3 seconds

## School Activities:

### Admissions Ambassador Secretary

- Conduct weekly meetings with entire group to discuss admissions events
- Organize and led Saturday tours
- Educate the new ambassadors on how to give tours
- Give tours to prospective families

### Robotics Team

- Participate in FIRST FTC robotics team 6010. Went to world championship
- Programmed autonomous feature. Integrated path following and localization algorithms

### Honor Disciplinary Board

- Voted by students and faculty as one of three junior members
- Show honesty and integrity and uphold others to do the same
- Meet with offenders of the honor code and encourage obedience

### Science Club head

- Organize and guide science club meetings where we discuss and learn various science concepts
- Asked an engineer to showcase his self-made submarine to the school
- Launched model rockets together with middle school teacher

### Varsity Tennis Team

- Singles on varsity tennis team

## Summer Experience:

Tennis coach - Led morning warm ups and camp activities 06/19 - 8/21

Camp Counselor - Taught kids about the environment 06/17 - 6/19

Camp Counselor - Taught kids on how to build and invent 07/17 - 7/18