# Aleksander Kurgan

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## **EDUCATION**

Deep Run High School (DRHS), Center for Information Technology (CIT) | Glen Allen, VA Aug. 2022 - Present Relevant Coursework: AP Human Geography, AP European History, AP Statistics, AP Computer Science Principles, AP Precalculus, Intro to Programming, IT Project Management, AP Calculus BC, AP Physics I, AP US History, AP English Language, AP Computer Science A

**GPA:** 4.58

George H. Moody Middle School, International Baccalaureate (IB) Program | Richmond, VA Sep. 2019 - June 2022 GPA: 4.0 | Gifted student program

Polish Primary and Middle Schools (Grades 1-8) | Polish Embassy, Washington, D.C | Sep. 2016 - Jun. 2023

GPA (Scale: 1-6): 6.0

Shady Grove Elementary School | Glen Allen, VA Sep. 2016 - Jun. 2019

**GPA:** | Gifted student program

Mount Pleasant Elementary School | Edmonton, Canada Sep. 2014 - Jun. 2016

## EXTRACURRICULAR INVOLVEMENT

#### Jazz Trombone | Primary Teacher: Dr. Toby Whitaker

2019 - Present

- Selected for early participation in Jazz Band Grades 6-8, George H. Moody Middle School
- Selected for early participation in Jazz Band Grades 9-12, Deep Run High School

#### Classical Euphonium | Primary Teacher: Professor Ross A. Walter

2015 - Present

- Selected for early participation in Advanced Band Grades 6-8, George H. Moody Middle School
- Selected for early participation in Top Wind Ensemble Grades 9-12, Deep Run High School

### Robotics | Member of FRC #1086 Blue Cheese, Ashland, VA

2023 - Present

- Computer Aided Designer (CAD): Developed complex 3D models of robots using (self-taught) professional CAD software (Onshape). <u>Click here to see example models</u>
- Computer Aided Manufacturer (CAM): Used CAM software Fusion360 to facilitate manufacturing of models
- Fabricator: Fabricated robot parts for First Robotics Competition robots using in-shop machinery

## Programming & Cybersecurity | Member of Computer Club at DRHS

2022 - Present

- Highly proficient in Javascript, HTML, CSS, Typescript and proficient in Python, and Java
- Proficient in Linux hardening skills utilized in the annual the Cyberpatriot competitions (2024-Present)
- Proficient in cryptography, hashing, forensics utilized in "Capture the Flag" cybersecurity competitions (Radford RUSecure, finalist; PatriotCTF)

#### PRESENTATIONS & PUBLICATIONS

• "Multiphonics on Euphonium: Solving the Mystery of the Third Note", Virginia Junior Academy of Science (VJAS) Symposium, 2021 Paper Presentation (Winner of the Second Prize, Physics Category)

#### PROFESSIONAL PERFORMANCES

Performance with the VCU Greater Richmond Youth Jazz Band directed by Dr. Taylor Barnett.
 May 14, 2024

o Carpenter Theatre at the Dominion Energy Center, Richmond, VA.

Performance with the VCU Greater Richmond Youth Jazz Band directed by Dr. Taylor Barnett.
 May 4, 2024

o Trinity Episcopal School Jazz Festival, Richmond, VA.

Performance with the VCU Greater Richmond High School Jazz Band directed by Toby Whitaker.
 May 6, 2023

- Sonia Vlahcevic Concert Hall, Singleton Center for the Performing Arts, Richmond, VA.
- "Rhapsody by James Curnow", with Dr. Magdalena Adamek, piano.

- November 9, 2022
- o Sonia Vlahcevic Concert Hall, Singleton Center for the Performing Arts, Richmond, VA.
- "Concertino" by Ernst Sachse, with Dr. Magdalena Adamek, piano.

December 1, 2021

o Sonia Vlahcevic Concert Hall, Singleton Center for the Performing Arts, Richmond, VA.

## **AWARDS & RECOGNITIONS**

Academic Awards	
AP Scholar with Distinction	
Deep Run High School Academic Excellence Award	
- Awarded for receiving all A's among all classes in all quarters of the school year.	
Deep Run High School Principal's Scholar	
- Awarded for ranking in the 99th percentile among 2.3 million nationwide PSAT testers.	
Polish Ambassadors Diploma for Exceptional Academic Achievement	2022, 2021, 2020, 2019, 2018
- Awarded for exceptional academic achievement with a GPA of 5.5 or above (on a 1-6 sca	ale).
United States Presidential Diploma for Outstanding Academic Excellence	e2022
Music Awards	
Deep Run High School Band Outstanding Sophomore Award	2024
Recognized as the top player in the Sophomore class of Deep Run High School bands for e	exceptional musical achievements.
Deep Run High School Fine Arts Department Award	2024
Second Chair All-Virginia Concert Band (Performance: April 18-20)	
- Ranked as the second-best euphonium player in Virginia for Concert Band, directed by V Department and Professor of the Practice of Music at Duke University.	Verena Mösenbichler-Bryant, Chair of the Music
Principal Trombone Greater Richmond Youth Jazz Band Program	
- Selected by Dr. Taylor Barnett as the first best trombone player in the acclaimed Greater	r Richmond Jazz Program.
Second Chair All Virginia Top Jazz Band	2024 (Grade 10)
- Ranked as the second-best jazz trombonist in Virginia's highest-level jazz band, directed O'Clock Lab Band at the University of North Texas.	l by Alan Baylock, Director of the prestigious One
All-District Band Euphonium Audition Winner and Participant (Grade 10)	0) 2024
Deep Run High School Band Outstanding Freshman Award	
- Recognized as the top player in the Freshman class of Deep Run High School bands for e	exceptional musical achievements.
Fourth Chair All-Virginia Symphonic Band (Grade 9)	April 27-29, 2023
Second Trombone Greater Richmond Youth Jazz Band Program	
- Selected by Professor Toby Whitaker as the second best trombone player in the acclaimed	d Greater Richmond Jazz Program.
All-District Band Euphonium Audition Winner and Participant	2023 (Grade 9), 2022 (Grade 8)
All-County Band Euphonium Audition Winner and Participant	
<ul> <li>2nd prize in the International Competition "GCC Series-Music of Americ</li> </ul>	ra"
- Selected as the second best Euphonium player in the international Great Composers Con	mpetition series.
<ul> <li>Finalist at International Tuba Euphonium Association VTEC Competition</li> </ul>	
<ul> <li>All-District Band Euphonium Audition Winner and Participant (Grade 6)</li> </ul>	2020
Programming and Cybersecurity Awards	
• Finalist Radford University RUSecure CTF Cybersecurity Competition	
Cyberpatriot Top 'Gold Category' All-Virginia Qualifier	
Winner of the "Code Beats" Summer Program competition, VCU	2022

Programmed a new hip-hop beat that won competition among around 40 submissions. Released as the opening track of the resulting Spotify album edited by DJ Harrison and Dr. Antonio García. Featured at the VCU's Jazz Orchestra concert in 2022. Click to listen

## **ADDITIONAL HONORS**

•	Winner of the "Who could be the Polish School at Washington D.C. Patron?" Speech Competition	2022	
•	George H. Moody Middle School All A Honor Roll Award	. 2022	
•	Polish School in Washington D.C. Poetry Recitation Competition Winner	. 2021	
•	Presidential Diploma for Outstanding Academic Excellence, Shady Grove Elementary School	. 2019	
•	Adam Mickiewicz Poetry Recitation Competition Winner	. 2018	
•	Write and Recite a Poem in Honor of Mother's Day Competition Winner	. 2018	
•	Polish School in Washington D.C. Poetry Recitation Competition 2nd Prize	. 2016	
•	Winner of the "Favorite Polish Tradition" Art Competition	2016	
VILLE ACTIVITIES & INTEDECTS			

## SKILLS, ACTIVITIES & INTERESTS

Languages: English (Native), Polish (Native), Spanish (Intermediate)

Programming Languages: Python, Java, Next.js, Typescript, Javascript, HTML, CSS

Software: Onshape, Fusion 360, VSCode, Git

Interests: Computer Aided Design, Programming, Mountain Biking, Cooking, History, Reading