

# NOLAN W. PLATT

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## EDUCATION

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Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA

Bachelor of Science, Computer Science, Expected May 2027

- **In-Major GPA:** 3.70/4.0    **Minors:** Physics and Astronomy.

Del Norte High School, San Diego, CA, June 2023

- **GPA:** 4.2; ranked in the top 9% of all California high school students by the University of California.

## EXPERIENCE

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Naval Air Systems Command (NAVAIR), Blacksburg, VA

Undergraduate Researcher

January 2025 – Present

- Collaborating with NAVAIR engineers to develop a Go/No-Go gauge for the aerial refueling (AR) hose on Lockheed Martin KC-130 tankers.
- Critical to the safety and operational efficiency of the U.S. Navy and U.S. Marine Corps' aerial refueling missions.
- This endeavor is through the Virginia Tech IDPro program.

Virginia Tech Department of Computer Science, Blacksburg, VA

Undergraduate Research Assistant

January 2025 – Present

- Under the direction of Dr. Cliff Shaffer and several PhD candidates, I am conducting critical research for the OpenDSA project.
- OpenDSA is a key component of the CS curriculum at Virginia Tech. Used at dozens of other universities. Sponsored by NSF.
- Utilizing **Python**, **Ruby**, **JS**, **Docker**, and **Sphinx**. I am focusing on updating outdated libraries and directives.

Virginia Tech Department of Computer Science, Blacksburg, VA

Undergraduate Research Assistant

January 2025 – Present

- Working under Dr. Sehrish Nizamani, I am conducting research on using various AI models for usability evaluations.
- Planning on publishing a research paper on usability evaluations by humans versus different AI models.

Virginia Tech College of Engineering IDPro, Blacksburg, VA

Undergraduate Research Assistant

August 2024 – December 2024

- Utilized computer vision and machine learning to automatically and precisely measure plant growth in indoor laboratory.
- Developed computer vision model in **Python**, implementing the **YOLO** object detection framework.

Phi Sigma Kappa Fraternity, Blacksburg, VA

Scholarship Chairman

December 2023 – November 2024

- Responsible for supporting academic success of over one hundred fraternity members.
- Coordinated and led study hours twice a week for fraternity. Assisted members in organization and communication skills.
- Monitored and provided feedback to all members regarding meeting school and chapter GPA requirements.
- Fundamental to increasing chapter GPA by 57% during my tenure.

Code Ninjas, Rancho Bernardo, CA

Computer Science Instructor

April - November 2022

- Taught hundreds of children aged six through fifteen in **JavaScript**, **Python**, **Scratch**, and **C**.
- Led classes in embedded and real time systems through the **Arduino** microcomputer.

## PROJECTS

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U.S. Patent Pending

Personal Endeavor

Fall 2022

- Real time simultaneous control and communication between spacecraft in avoiding collisions with space debris.
- Patent Pending 63/380,755 - Filed Oct 24, 2022
- Went through engineering design process of filing patent application for collision detection system via infrared.
- Created due to the growing concern of space debris in Low Earth Orbit.

Environmental Mapper (Envmapper)

Del Norte High School

Spring 2022

- Constructed and scaled a large and advanced mapping engine for environmental issues across San Diego County.
- Implemented **OpenStreetMap** and **MySQL** to create a fast and concise backend infrastructure.
- Utilized **MySQL** for storing user data in the registration and mapping system.
- **GitHub:** <https://github.com/nolanplatt/envmapper>

GradeGetter

Del Norte High School

Fall 2022

- Created an advanced program in **NodeJS**, incorporating **Selenium** and **PM2**, that constantly checks a user's grades.
- Adopted by many students at the high school because of the lack of an institutional notification system.
- My design and deployment of the program helped improve grade awareness by 25%.
- **GitHub:** <https://github.com/nolanplatt/SynergyGradeGetter>

## SKILLS

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*Programming/Scripting Languages:* Java, JavaScript, Python, C, C++, Assembly x86-64, Go, MATLAB, PowerShell.

*Frameworks and tools:* Linux, Git, Nginx, Firebase, OpenStreetMap, Microsoft Active Directory, MySQL, Microsoft InTune, Tensorflow, Selenium, PM2, YOLO, Arduino, Raspberry Pi, Microsoft SharePoint, Microsoft Excel, Remote Desktops (RDPs), Microsoft Azure.