

Engineering Portfolio

Silver Eagles #21428

2023 - 2024



Meet Our Team

We are the **Silver Eagles** from Salesian High School in New Rochelle, NY. We first formed in 2021, starting with 4 members all new to the world of robotics. We've since grown to 13 members and have setup an infrastructure to be able to teach new members the skills they need to contribute in many ways. We're comprised of students, ranging from 9th to 12th grades, all from the NYC and Westchester areas.



David
Coach



Charlie
Captain



Michael
Captain



Jorge
Lead Builder



Andres
Youth Mentor



Brandon
Mentor



Curtis
Programmer



Michael
Lead Designer



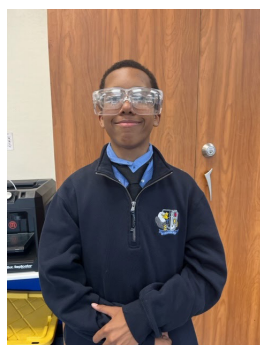
Quincy
Operations



Aiden
Builder



Ms. Gomez-Botero
Mentor



Wilkin
Builder



Walter
Youth Mentor



Kai
Builder



Alex
Builder

Goals

Post-Competition Reflections

	What Went Well	Improvement Areas	Action Items
First Competition	<ul style="list-style-type: none"> • Drive train is intuitive and reliable 	<ul style="list-style-type: none"> • No autonomous • No drone launcher • Can't pick up more than 1 pixel • Can't pick up pixels reliably 	<ul style="list-style-type: none"> • Add autonomous functionality • Switch from passive intake to active intake • Add drone launcher
Second Competition	<ul style="list-style-type: none"> • Autonomous parking Active intake can pick up pixels • Able to place pixels on board one at a time reliably 	<ul style="list-style-type: none"> • Autonomous program can't place pixel on board • Drone launcher can't clear the field reliably • Active intake sometimes takes a few seconds to bring pixel onto plate 	<ul style="list-style-type: none"> • Add ability to pick up and place two pixels at once • Add more detailed autonomous capability Improve drone launching capability • Add hanging capability

Community Outreach

Our commitment to community outreach is at the core of our First Tech Challenge journey. Through programs like the Saturday Academy, collaborations with Edgemont Robotics, and engagement with Don Bosco Prep, we strive to inspire, educate, and empower the next generation of engineers. These initiatives showcase our technical prowess and exemplify our dedication to building a solid, inclusive robotics community.

Saturday Academy

One of the ways we reach out to the community is by holding a Saturday academy, a dynamic program designed to introduce young minds to the exciting world of robotics. Local kids from grades 6–8 can learn the fundamentals of robotics, coding, and problem-solving every Saturday. We aim to inspire the next generation of engineers and innovators through engaging hands-on activities and interactive sessions. They work directly in our lab, and most of the materials they use are 3D printed by our lead 3D designer, Matthew Carrasco, during our meetings.

School-Wide

Alternatively, we source our outreach through community held club fairs, in-school advertisements, as well as announcements relating to the team's success and status within competitions. This has attracted several new members, many of whom take leadership roles quickly. Such outreach has also provided an interest and cooperation from those outside of the program and realm of robotics, not only assisting in the development of already existing projects and ideas, but allowing new ones to be created through such collaborations.

Collaborations

Our involvement with Edgemont Robotics has led to notable achievements, including successful competition performances and increased student participation. The camaraderie built through this collaboration has created a robust support network within the broader robotics community, fostering an environment where knowledge and expertise are freely exchanged.

Our commitment to positively impacting students' educational experiences is at the heart of our community outreach. Our team actively engages with our brother school, Don Bosco Prep, who helped us with our process of building a team in our opening stages two years ago. This initiative introduced students to the world of robotics and aligns with our mission to promote STEM education and foster a passion for technology.

Through sustained efforts at Don Bosco Prep, we have witnessed a significant growth in interest and participation in STEM-related activities. By incorporating robotics into the school's educational landscape, we contribute to the holistic development of students, preparing them for the challenges and opportunities in the rapidly evolving technological landscape.

