COLORADO STATE UNIVERSITY
EXTENSION

CSU DRONE CENTER

UAV INSTRUCTOR AND DRONE PILOT DENVER METROPOLITAN AREA

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PROJECT INTRODUCTION

The CSU Drone Center, as part of Walter Scott, Jr. College of Engineering, held an Unmanned Aerial Systems (UAS) Aviation summer program at the CSU Spur Campus. The program engaged high school students in the Denver Metro area, particularly those in underrepresented groups.

The project aimed to introduce these students to the aviation and aerospace fields and equip them with knowledge and experience for collegiate and professional success. The CSU Drone Center developed and presented material to prepare students to pass the FAA Part 107 exam for their Commercial Drone License. Featuring both hands-on UAV flight training and classroom instruction, the program equipped students with experience and skills to become adept and responsible pilots. By removing financial barrier, the program provided a unique and diverse group of students with the opportunity to explore UAS technologies, encouraging their interest in STEM and aviation careers, as well as future enrollment in CSU programs.

INTERNSHIP GOALS

- Introduce High School students to aviation, drones, their diverse applications and related career opportunities
- Open the door for underrepresented groups to engage in aviation
- Remove the financial barrier for students to get involved with aviation and acquire a Commercial Drone License
- Get students hands-on flight experience
- Equip students with information to understand aviation rules and fly safely

HOW DOES THIS APPLY TO YOUR EDUCATION

As an engineer and avid drone enthusiast, I value the opportunity to connect with future aviation professionals, as well as enjoy flight time with these students! After I complete my Computer Engineering B.S. this December, I plan to continue into the defense industry and work on developing uncrewed aircraft.

WHAT YOU DID

During the CSU Spur Campus Unmanned Aerial Systems (UAS) Aviation summer program, we conducted three flight schools, reaching a total of 42 students from over 26 different school, as well as 4 teachers. Many of these students experienced flying a drone for the first time. We taught them essential knowledge including the rules of airspace, flight dynamics, and drone, pilot and operational safety. Additionally, we took students to the Colorado Air and Space Port, where they had the chance to examine various private aircraft up close and gain a unique experience inside the control tower, listening to air traffic controllers manage the airspace. During these sessions, I ran flight teams of students flying drones, reviewed material with students daily using an electronic software, updated material and improved the visual impact of slides, and connected with students individually.

Figure 1. Session 2 Group Photo

Pictured are students alongside program instructors Adam Smith (center), Alex Olsen-Mikitowicz (right), and McKenzy Johnson (left)

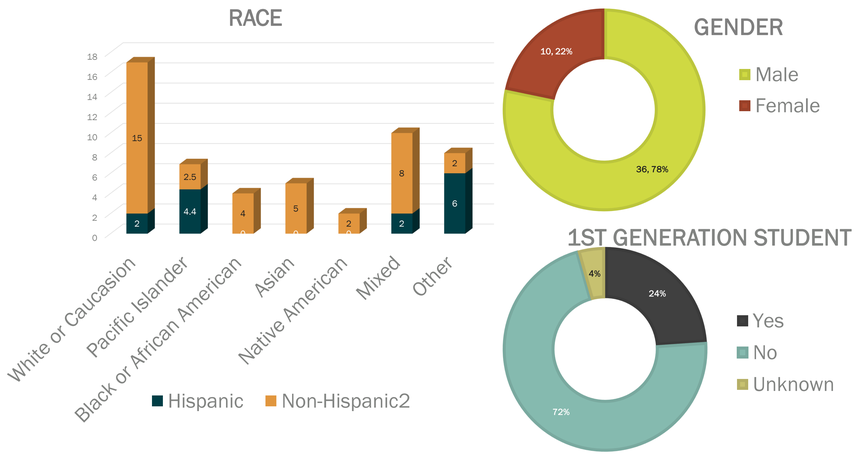
Figure 2. Field Trip to the Colorado Air and Space Port

Figure 3. Instructing Student Flight

WHAT YOU LEARNED

Throughout the program, I observed significant growth in the students' abilities and confidence. Initially, many students were timid and unsure during their first flight. However, by the end of the week, these same students had progressed to become confident and safe pilots. The hands-on experience and comprehensive instruction allowed them to grasp complex concepts and apply them effectively. Being able to facilitate this growth was a valuable experience for me and gave me confidence in my own abilities as a drone pilot and instructor. The visit to the Colorado Air and Space Port provided valuable insights into real-world aviation operations, enhancing both the students and my own understanding of airspace management. I look forward to applying the organizational, planning, leadership and team skills I developed during this program to my future career.

Figure 4. Program Demographics (42 Students, 4 Teachers)



NEXT STEPS

The CSU Drone Center has taken steps to continue offering this program for future summers. Moving forward, the goals are to increase the diversity and number of the students by this program, improve and develop the material, and create more opportunities for the students to connect with the aviation community.