

Ervin Liao

School: Sunset High School, Grade 12

State: Oregon

## What Drives Me

Flight has always enchanted me. From a young age, I folded paper airplanes and collected model airplanes. As I grew older, I started building drones and racing them from the first-person perspective; the closest I could get to actually flying. While traveling, the airport was my favorite part. As I waited for my turn, I could watch planes take off and land in a neverending loop. Additionally, I loved visiting air museums, and I was most fascinated by the Concorde I saw in Seattle; I hoped that I could one day travel at supersonic speeds. However, while I dreamed of one-day building the next generation of aircraft, little did I know about the severe consequences planes had on our planet.

As I grew older, I learned about the repercussions of flight. About how fossil fuels used to power planes contribute to global warming. About how excess pesticides sprayed from airplanes contaminate ecosystems. I learned how airplanes relate to many problems ravaging humankind today. This has led me to pursue aerospace engineering, as I hope to both further innovation and revitalize our planet through the field of aviation.

To reach my future goals, I will need to become a resilient person. In soccer, I trained hard, working up from the freshman team to finally making the varsity squad my senior year. I have qualified for the MultiGP Drone Racing Championships three years in a row, after crashing and not completing a single lap at my first race two years prior. I took on the job as the secretary of *Portland Drone Racing*, the largest drone racing club in Oregon, hosting various practices for pilots around the state and encouraging them to further their passion for aviation. Furthermore, drones have led me to compete in the CONRAD Challenge with my peers, where we addressed the problem of reducing excess pesticides and fertilizers that could damage the environment. We developed *FarmAir*, which is an autonomous drone fleet that uses machine learning to pinpoint where to spray. Our solution was validated by industry professionals at Cornell University and we were named “Conrad Innovator.”

Through my experiences in high school and future endeavors in college, I know I have the mental and physical fortitude to reach my goals. After I graduate I aspire to work and improve the commercial aviation field. Specifically, I hope to revive supersonic travel in a sustainable,

accessible, and eco-friendly way. We have gone a long way from the start of human history to now, harnessing the ability to fly, but I believe there is much more innovation yet to be done. To reach my ambitious goal would be to save time for millions of travelers every day and aid our planet from the immense damage we humans have already done. Finally, making supersonic commercial jets a reality would allow children like me to travel at supersonic speeds, instead of walking through an aircraft wondering if they would ever experience it in the sky, fostering the next generation of aerospace innovators.