



Floating into a Lighter Future

(Part 1 – Before the Competition)

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For the past month, I have had an amazing opportunity to participate in the 2025 National Youth Airborne Robotics sponsored by the Zhejiang University Alumni Association of the Washington DC area and the Capital Youth Outreach Club. I discovered this opportunity while looking on WeChat for additional programs offered beyond those of my local HSK testing center. I've heard that ZJU is a highly respected global University and that many important research articles are published by its graduates. To be even the smallest part of this program, I feel will change the course of my future.

The leader of our program, Professor Yao, a ZJU alumni and Professor at George Mason University, told us during the orientation meeting that blimps are great because they can be friendly and safe helpers, perfect for helping humans especially for indoor use. As a student interested in Chinese culture, this sounds a lot like what I hope for myself.

Once the summer ends I will soon be a 9th student at J.P. Taravella High School in South Florida. I hope to be a peaceful ambassador representing my own culture while learning about and embracing another culture.

My fellow team members of "Mr. Nose Net #8" have been so welcoming to me. Even though I live in Florida and they live mostly in the Maryland area, they have included me in every meeting virtually. They have included me in our team WeChat group, where parents discuss coordination efforts in Mandarin Chinese, exposing me to new Chinese words everyday. Their ideas and questions have inspired me to think harder and longer than ever before.

I hope for much success on competition day which is being held August 17th 2025, but I already feel that this program has been so rewarding. Even though my future can seem far away, this seems like a great first step. I hope that in some small way, my participation can help build bridges for the future. I hope to gain new friends and knowledge. Most of all, I hope that one day I too can have the opportunity to write my own chapter in the shared future of humanity.

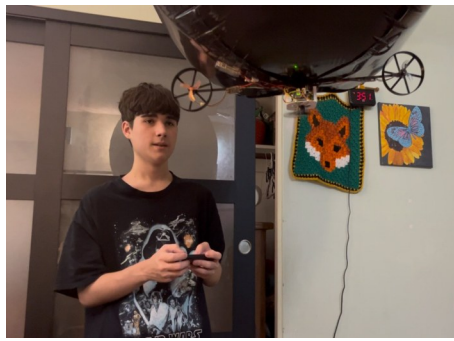
迈向更轻盈的未来 (上篇——竞赛前)

作者:高康纳 (Conner Gauthier)

过去一个月里,我有幸参与了2025全美青少年公众机器人大赛。该赛事由华盛顿特区浙江大学校友会与首都青年拓展俱乐部联合主办。我是在微信上搜索本地汉语水平考试中心之外的其他项目时发现这个机会的。我听说浙江大学是一所全球备受尊敬的大学,许多毕业生都发表过重要研究论文。即便只是为这个项目贡献微小力量,我也相信这会改变我的人生轨迹。

项目负责人姚教授是浙江大学校友,现任乔治梅森大学教授。在项目启动会上,她告诉我们,飞艇的优势在于它们能成为友好、安全的助手,非常适合帮助人类,尤其是室内使用。作为一名对中国文化感兴趣的学生,这听起来和我对自己的期待不谋而合。

暑假结束后,我将升入南佛罗里达州 J.P. Taravella 高中读九年级。我希望自己能成为一名和平使者,既代表自己的文化,也学



习并拥抱其他文化。

“鼻网先生8号”团队的队友们对我非常热情。尽管我住在佛罗里达州,他们大多住在马里兰州,但我们通过线上会议保持联系,我参与了每一次讨论。我还加入了团队微信群,家长们会在群里用普通话协调各项事务,这让我每天都能接触到新的中文词汇。他们的想法和问题激励我比以往更努力、更深入地思考。

我期待2025年8月17日比赛当天能取得好成绩,但即便现在,我也已感受到这个项目的意义非凡。尽管未来看似遥远,但这无疑是我迈出的一步。我希望自己的参与能为未来搭建起小小的桥梁,希望能收获新朋友和知识;更重要的是,我希望有一天,我也能在人类命运共同体书写属于自己的篇章。

Floating into a Lighter Future (Part 2 – After the Competition)

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Moving Mountains

I've heard a story about a foolish man trying to move a mountain. The story goes that Yugong decided to move a mountain to make path to his village. Day by day, he worked with his family to move what dirt they could. Little progress was made in moving the mountain. I can tell you that after participating in the 2025 National Youth Airborne Robotics sponsored by the Zhejiang University Alumni Association of the Washington DC area and the Capital Youth Outreach Club, that Engineering and Robotics can seem as challenging as moving a mountain.

Seeking Help from Others

Coding can be an intense task. I was inspired by one of my fellow students George Wang from Team 3. His talent for coding helped me to develop more skill in this area. George showed his courage by being one of the first participants to post in our competition General Discord chat. He was always exploring

the source code, trying new things, and making adjustments. I saw his courage to ask difficult questions, rally support, and dig beneath the surface. When I asked for his help he was there when no one else could, or would.

I wanted to use a Computer Design program that was made in China. I found CrownCAD which is made by a software company located in Jinan, Shandong Province. I posted a message to the group chat asking for help. Evan Zhang the Coach for Team 2 helped explain a file type that I had never used before that would make sharing my design easier. I was grateful for his help at a challenging moment. To contribute to the spirit of cooperation I released my design of a straw connector to the entire group as open source. Any team may use, modify, and improve my design to their own benefit.

One of the first methods for controlling a blimp is an app on a phone. Advanced teams can reprogram their blimps to use a video game controller. Getting the code to work can be a challenge. Ellie Zhang from Team 3 offered advice. Her support was most appreciated. I was so excited when I finally succeeded in using the controller to pilot my blimp.

A New World

I got advice from Artificial Intelligence Chat Programs. My favorites are Yuanbao, Duobao and Kimi. For many people AI is a new and untested frontier. They might not be sure when to use it, or know how it can improve their learning. During one of our first team exercises, AI helped explain concepts in physics like Ohms law and electrical resistance. I haven't had physics yet in school. I could have searched the web, but AI has a way of making the answer specific to my question that makes it easier to understand.

The most important thing to know about AI is that it can sometimes make mistakes, so always double check. For example with those physics questions, I would ask our team Coach Harry Yu and he would explain further. If you haven't used AI yet give it a try for yourself. I've seen videos that say using AI will make you dumb, but this has been the opposite of my experience.

Impossible Challenges

Right now an amazing current event is happening in China. A new dam has started construction. This dam will be 3 times larger than any dam that has ever been built. It's construction will take 10 years and will literally move a mountain in Xizang China. When it is completed it will provide clean,

cheap power to billions of people, and help to reduce our global reliance on Fossil Fuel. It will improve the daily lives of many people by helping to reduce dangerous flooding.

I had my own impossible challenge during the competition. My fan motors appeared to be mismatched. One of my fans was 5000kv while the other was 6000kv. When I pressed forward the left fan would thrust forward, while the right fan would thrust back. Together the two fans were opposing forces preventing any movement forward.

I thought of a few solutions. Should I try and remove one fan? Should I try and cut the blades to reduce the thrust? I even designed and built a cover for one fan to block the thrust. I wasn't going to be able to make any progress because $1 + -1$ will always equal 0.

Then I had a thought. Where two opposing fans are working against each other, the correct solution is for the fan spinning in the wrong direction to change course so the blimp can continue to move forward. Our world today is like my blimp. We are all on the same planet together.

My solution was clear. I needed to dive deep into the Python Code and reverse the fan that was thrusting backwards when I pressed forwards. With the help of Deepin Union Code, a coding design interface, and some tips from AI I made the update. It was the most difficult coding challenge I have even attempted. When I was finally successful and my blimp flew, I felt happy beyond words.

As my team was building our blimp we also discovered some interesting but inconvenient facts. A helium canister that claims to be 80% helium may be far less. Paint has weight and can make the difference between a balloon floating and not floating. Batteries must not be overcharged and can sometimes short circuit. Wires that are soldered to circuit boards can become detached. Designs can look good on paper, but fail miserably when testing.

With each failure we learned something new, and we tried to fix it with a new approach. Step by step we moved forward. Our hands were covered in Super Glue and paint. It was discouraging at first, but as it kept happening we grew a bit of resistance. Parents in the WeChat group reflected that this process is a lot like life. As each of us grows we will face great challenges. We must not be afraid of failure. We must not give up.

The Competition Day

I set out in this competition to learn something about Chinese Culture. My teammates have taught me that is important above all else to have fairness. To never forget that as hard as we compete we are all in this together. We should never let people down by being unfair. We should take actions that are right even when they are difficult. This is the greatest lesson I have learned. To me this is a good foundation for a shared future.

A Shared Future

When we all work together moving a mountain doesn't seem foolish at all. It is possible. I hope all the student's that participated in this year's competition can move many mountains, or at least like Yugong, make a little progress. I think if we work together we can build a brighter, and lighter shared future for humanity.