

NASA University Student Launch Initiative

The NASA University Student Launch Initiative sounds like a boring title. However, this project is strait out of every nerd kid's dream. The Goal of this project is to produce a rocket that flies above one mile, and then deploys a chute bringing the rocket and its precious rover payload back down to earth. Next the rover explodes into action! I mean that literally in that a black powder charge is used to deploy the rover. The rover then pulls away from the rocket and deploys solar panels just like a rover on mars. Though the rocket and rover are super cool and would make any engineer feel like a rock star, there was much more that went into this project other than just the rocket and the rover. The team also created a top notch web page. This web page includes a description of the project, bios for each team member along with all the documentation for the project required by NASA.

Another really awesome aspect of this project is the collaboration required to implement this project. This project required many different electrical and mechanical components. The rover itself (arguably the coolest part of the project) has many different components including the Raspberry Pie that controls it, the system that deploys the solar panels, the motors and controllers that move the wheels. The software development team was just once piece of the puzzle. The software team was able to work with a team of mechanical engineers and electrical engineers to produce the rocket. This provides the team members with good real world experience working with a team. In terms of practical experience this maybe one of the projects strongest points however it may also be the projects down fall. This project required many different teams to collaborate and had many different moving parts. The diverse nature of the team also made agreeing on a design choice difficult. In my interview with Kevin that was his biggest complaint with the project was that it seemed like things changed quickly and with little notice from other team mates.

One of the primary stake holders for this project was the team members themselves. One of the main motivators behind this project is that this is a competition with other colleges. This competition is a no holds bar rocket fight to the death where teams from around the country pit themselves against their peers to see who can build the best overall project. This project also combined several different capstone projects so each team was a stakeholder in the other teams work. In essence they were all counting on each other to make good on their work. It should also be noted that John Lyndall as an adviser to the USLI team. Lyndall is a member of the Oregon Rocketry Association and hoped to generate more interest in rocketry. Similarly, Dr. Nancy Squires, the project sponsor, has set a high bar for the team and hopes to generate more interest in rocketry at OSU.

If I were to rate this project on a scale from one to ten I would give it an eight out of ten. I chose this ratting for several reasons. Firstly, I chose to rate this project higher than average because I think it's really freaking cool. However, this project also seemed that it may be trying to pack to many feature into too little time. Generally, it seemed this project suffered a bit from integration issues when it came to

putting everything together. However it should be said that though this team has some issues they did better than any other rookie team at this particular challenge.

Interview With: Kevin Turkington.

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