I was standing outside on a hot summer night in Florida and just a few miles from the ocean.I was waiting for a miracle to happen.That summer,I was privileged to work as an intern at NASA's Kennedy Space Center,and the miracle I was waiting for was the launch of the Columbia Space Shuttle carrying the Chandra X-Ray Observatory,a telescope that would allow scientists to peer into the edge of black holes.

The entire sky filled with light.And it was as if it was daytime in the middle of the night.Soon,we could feel the rumble of the engines vibrating in our chests.And it wasn't a miracle;it was the combined effort of a team of thousands of people who worked together to make was seemed impossible a reality.And I wanted to join that team.

So I decided to apply to a university where I could study aerospace engineering.And the following year,I started at MIT in my engineering training and joined a student project building space robots.And everything was going as I planned,except I was confused about something important.

Now,my confusion arose in my summer breaks.I traveled to a school in Kenya,and there I volunteered with girls ages five to 17,giving them lessons in English and math and science.And they taught me songs in Swahili.And mostly,

I just spent time getting to know the girls,enjoying their presence.And I saw that these girls and the leaders in their community,they were overcoming important barriers to allow these girls to have the best possible chances in life.And I wanted to join that team.

I wanted to be part of a team that would help break down barriers and improve the lives of girls around the world.But I was worried that studying aerospace engineering wasn't the most useful.I was worried this team in Kenya couldn't use the technology I was learning about space.

But thankfully,I still learned that I was wrong.I came back and interned at NASA again,and this time,a mentor taught me that countries like Kenya had been using space technology for decades to improve the lives in their own countries.And then I knew that I could have a career in space and in development.

This idea is not new.In fact,in 1967,the nations of the world came together to write the Outer Space Treaty.This treaty made a bold statement,saying,"The exploration and use of outer space should be carried on for the benefit of all peoples,irrespective of their level of economic or scientific development."

We have not truly lived up to this ideal,although people have worked for decades to make this a reality.Forces such as colonialism and racism and gender inequality have actually excluded many people from the benefits of space and caused us to believe that space is for the few or the rich or elite.But we cannot afford this attitude,because the world is engaged in a vital mission to improve life for everyone.

Our road map for this mission comes from the 17 Sustainable Development Goals of the United Nations.All the member states of the United Nations have agreed that these are priorities between now and 2030.These goals give us our key moments and opportunities of our time--opportunities to end extreme poverty,to insure that everyone has access to food and clean water.

We must pursue these goals as a global community.And technology from space supports sustainable development.In fact,there are six

space services that can help us pursue the Sustainable Development Goals.Over the next few minutes,let's explore these six services,and see examples of just a few of the goals they help support.You ready?OK.

Communication satellites provide access to phone and internet service to almost any location on Earth.This is particularly important during times of disaster recovery.

hen Typhoon Haiyan struck the Philippines,the local communication networks needed to be repaired,and teams brought in inflatable communication antennas that could link to satellites.This was useful during the time of repair and recovery.

Positioning satellites tell us where we are by telling us where they are.Scientists can use this technology to track endangeredwildlife.This turtle has been fitted with a system that allows it to receive location information from positioning satellites,and they send the location information to scientists via communication satellites.Scientists can use this knowledge to then make better policies and help determine how to keep these animals alive.

Earth observation satellites.They tell us what's going on in our environment.Right now,there are about 150 satellites operated by over 60 government agencies,and these are just those observing the Earth.And meanwhile,companies are adding to this list.Most of the governments provide the data from the satellites for free online.

Some of these satellites provide images like this,that show what you would see from a camera.This is an image showing agricultural land in Kansas.However,the majority of the Earth observation satellites don't take pictures at all.

They take measurements.And they combine these measurements with complex computer models and make beautiful,global visualizations such as this one,showing the ocean currents and the temperature of the ocean,globally.

r we can look at the salt and smoke and dust in the atmosphere,or the rainfall and snowfall,globally,as well as the annual cycle of vegetation on land and in the ocean.

Now,scientists can take this information about the rainfall and the vegetation and use it to understand what areas on Earth are indanger of a famine or a drought and provide that information to aid organizations so they can be prepared with food aid before the hunger becomes severe.

In space,we have an orbiting laboratory on the International Space Station.The vehicle and everything inside are in a form of free fall around the Earth,and they don't experience the effect of gravity.And because of this,we call it"microgravity."When astronauts are in the microgravity environment,their bodies react as if they're aging rapidly.

Their bones and muscles weaken,and their cardiovascular system and their immune system change.As scientists study how to keep astronauts healthy in space,we can take the exercises and techniques we use for astronauts and transfer them to people on Earth to improve our health here.

Often,as we develop technology for astronauts and exploration or for spacecraft,we can also transfer those inventions to improve life on Earth.Here's one of my favorites.It's a water filtration system,and a key component of it is based on the technology to filter wastewater on the space station.

It's now being used around the world.Space is also an infinite source of inspiration,through education,through research and astronomy and that age-old experience of stargazing.Now,countries around the world are engaging in advancing their own development by increasing their local knowledge of engineering and science and space.

Let's meet some of the world's newest satellite engineers.This is Elyka Abello,from Venezuela.Elyka is training as a satellite engineer as part of her national satellite program in Venezuela.She has designed a software tool that allows her team to better design the power systems for engineering.

This is Adel Castillo-Duran,from the Philippines.Adel is both a meteorologist and a satellite engineer,and she uses data from satellites in her weather forecasting.

And finally,meet Hala.Hala is from the Sudan,and as she was studying electrical engineering as an undergraduate in Khartoum,she and several students decided to build their own satellite.And later,Hala earned a scholarship to study satellite engineering at the graduate level.

These stories that I've shared with you all illustrate that space truly is useful for sustainable development for the benefit of all peoples.But we have more work to do,because there are still barriers that exclude people from space and limit the impact of this technology.For many people,Earth observation data is complex.

And satellite communication services are too expensive.And microgravity research just appears to be inaccessible.This is what motivates my work as a professor at MIT's Media Lab.I've recently founded a new research group called Space Enabled.We are working to tear down these barriers that limit the benefits of space.

And we're also going to develop the future applications that will continue to contribute to sustainable development.We'll keep on this work until we can truly say that space is for the benefit of all peoples,and we are all space enabled.

**Monthly Work Schedule**

Shanghai Sieda Technology Co.,Ltd.department：Name：

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Work Item** | **Tasks** | **Planned time** | **Completion time** | **Remarks** |
| 1 | Promotion | Marketing | Oct.8,2021 | Oct.10,2021 | / |
| 2 | Price | Purchasing | Nov.8,2021 | Nov.9,2021 | / |
| 3 | Product | Updating | Nov.20,2021 | Nov.23,2021 | / |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| 7 |  |  |  |  |  |
| 8 |  |  |  |  |  |
| 9 |  |  |  |  |  |
| 10 |  |  |  |  |  |