



1
00:00:19,109 --> 00:00:17,269
and i grew up in orlando florida

2
00:00:22,310 --> 00:00:19,119
living close to the kennedy space center

3
00:00:23,830 --> 00:00:22,320
and as i grew up i could see launches

4
00:00:25,189 --> 00:00:23,840
so we would always stop whatever we were

5
00:00:26,230 --> 00:00:25,199
doing if we could see it launched even

6
00:00:27,589 --> 00:00:26,240
if we were driving down the road we

7
00:00:30,070 --> 00:00:27,599
would pull over so we could see the

8
00:00:31,910 --> 00:00:30,080
space shuttle go up

9
00:00:33,590 --> 00:00:31,920
right now i'm a graduate student

10
00:00:35,830 --> 00:00:33,600
starting my fourth year

11
00:00:38,069 --> 00:00:35,840
studying aerospace engineering and

12
00:00:39,510 --> 00:00:38,079
policy at the massachusetts institute of

13
00:00:41,030 --> 00:00:39,520

technology

14

00:00:43,270 --> 00:00:41,040

so i've actually just finished writing a

15

00:00:44,630 --> 00:00:43,280

master's thesis that's entitled the use

16

00:00:46,709 --> 00:00:44,640

of satellite based technology in

17

00:00:49,110 --> 00:00:46,719

developing countries and in that thesis

18

00:00:51,029 --> 00:00:49,120

i focused on satellite remote sensing

19

00:00:53,510 --> 00:00:51,039

satellite communication and satellite

20

00:00:55,430 --> 00:00:53,520

navigation and looked at how all those

21

00:00:59,270 --> 00:00:55,440

technologies can be used to meet needs

22

00:01:02,709 --> 00:01:00,709

i've had a chance to visit africa

23

00:01:04,710 --> 00:01:02,719

several times and i'm really interested

24

00:01:07,590 --> 00:01:04,720

in how satellites can help

25

00:01:09,750 --> 00:01:07,600

people's lives in practical ways

26

00:01:11,990 --> 00:01:09,760

nasa's sally technology can help us in

27

00:01:14,310 --> 00:01:12,000

understanding the food we eat and how we

28

00:01:16,149 --> 00:01:14,320

can get it and how we grow it

29

00:01:17,109 --> 00:01:16,159

so it's very important for farmers to

30

00:01:18,310 --> 00:01:17,119

understand

31

00:01:20,070 --> 00:01:18,320

first what the weather is doing and what

32

00:01:22,390 --> 00:01:20,080

they expect it to do throughout the year

33

00:01:23,749 --> 00:01:22,400

and also the health of their crops and

34

00:01:25,270 --> 00:01:23,759

whether or not there's pests attacking

35

00:01:26,870 --> 00:01:25,280

their crops

36

00:01:28,469 --> 00:01:26,880

and they can give farmers and whole

37

00:01:31,190 --> 00:01:28,479

governments information about whether to

38

00:01:32,789 --> 00:01:31,200

expect a famine or a drought or other

39

00:01:34,230 --> 00:01:32,799

dangerous problems that might reduce the

40

00:01:35,429 --> 00:01:34,240

food supply

41

00:01:37,510 --> 00:01:35,439

and if they have that information in

42

00:01:39,190 --> 00:01:37,520

advance they can actually respond and

43

00:01:41,429 --> 00:01:39,200

prepare for such a thing and get help

44

00:01:43,109 --> 00:01:41,439

before it happens

45

00:01:44,950 --> 00:01:43,119

when i was an undergrad i was part of

46

00:01:47,749 --> 00:01:44,960

the nasa academy it's a special

47

00:01:49,590 --> 00:01:47,759

internship program that is whose goal is

48

00:01:51,510 --> 00:01:49,600

to train the future leaders of the space

49

00:01:53,350 --> 00:01:51,520

program so they bring people who are

50

00:01:55,429 --> 00:01:53,360

passionate about space and are willing

51
00:01:57,910 --> 00:01:55,439
to think about space every day for 10

52
00:01:59,109 --> 00:01:57,920
weeks non-stop

53
00:02:00,630 --> 00:01:59,119
the first advice i would give to

54
00:02:01,749 --> 00:02:00,640
somebody who's young and thinking about

55
00:02:03,429 --> 00:02:01,759
science

56
00:02:05,590 --> 00:02:03,439
is to figure out what they enjoy in

57
00:02:07,429 --> 00:02:05,600
school what things they like to learn if

58
00:02:09,510 --> 00:02:07,439
they think that science homework and

59
00:02:11,190 --> 00:02:09,520
science lessons are exciting

60
00:02:12,470 --> 00:02:11,200
then they're in a great position to

61
00:02:16,550 --> 00:02:12,480
think about being an engineer or

62
00:02:20,790 --> 00:02:18,949
sometimes you can enjoy science but find

63
00:02:22,630 --> 00:02:20,800

the math tricky or you like the

64

00:02:24,070 --> 00:02:22,640

fundamental discussion and the questions

65

00:02:26,070 --> 00:02:24,080

but actually doing the science problems

66

00:02:27,510 --> 00:02:26,080

or homework is really hard

67

00:02:29,190 --> 00:02:27,520

i've needed help in every single one of

68

00:02:31,030 --> 00:02:29,200

my classes throughout my challenging

69

00:02:33,509 --> 00:02:31,040

engineering career and i always work

70

00:02:35,430 --> 00:02:33,519

with people who can help me learn

71

00:02:37,509 --> 00:02:35,440

the neat thing about engineering

72

00:02:39,509 --> 00:02:37,519

is that you can learn scientific ideas

73

00:02:41,589 --> 00:02:39,519

and principles and then you can get neat

74

00:02:43,350 --> 00:02:41,599

ideas and be very creative and say hey

75

00:02:45,830 --> 00:02:43,360

no one has ever tried taking that

76

00:02:47,830 --> 00:02:45,840

information and then making this new

77

00:02:49,589 --> 00:02:47,840

invention but i can do that and if i get

78

00:02:50,790 --> 00:02:49,599

a team of people to work with me who

79

00:02:52,309 --> 00:02:50,800

have different information and different

80

00:02:54,470 --> 00:02:52,319

background and different training we can