

TEDTalks, Sanjay Dastoor

A skateboard, with a boost

00:12	Today I'm going to show you an electric vehicle that weighs less than a bicycle, that you can carry with you anywhere, that you can charge off a normal wall outlet in 15 minutes, and you can run it for 1,000 kilometers on about a dollar of electricity. But when I say the word electric vehicle, people think about vehicles. They think about cars and motorcycles and bicycles, and the vehicles that you use every day. But if you come about it from a different perspective, you can create some more interesting, more novel concepts.
00:48	So we built something. I've got some of the pieces in my pocket here. So this is the motor. This motor has enough power to take you up the hills of San Francisco at about 20 miles per hour, about 30 kilometers an hour, and this battery, this battery right here has about six miles of range, or 10 kilometers, which is enough to cover about half of the car trips in the U.S. alone. But the best part about these components is that we bought them at a toy store. These are from remote control airplanes. And the performance of these things has gotten so good that if you think about vehicles a little bit differently, you can really change things.
01:28	So today we're going to show you one example of how you can use this. Pay attention to not only how fun this thing is, but also how the portability that comes with this can totally change the way you interact with a city like San Francisco.
01:43	(Music) [6 Mile Range] [Top Speed Near 20mph] [Uphill Climbing] [Regenerative Braking]
02:50	(Applause) (Cheers)
03:00	So we're going to show you what this thing can do. It's really maneuverable. You have a hand-held remote, so you can pretty easily control acceleration, braking, go in reverse if you like, also have braking. It's incredible just how light this thing is. I mean, this is something you can pick up and carry with you anywhere you go.
03:28	So I'll leave you with one of the most compelling facts about this technology and these kinds of vehicles. This uses 20 times less energy for every mile or kilometer that you travel than a car, which means not only is this thing fast to charge and really cheap to build, but it also reduces the footprint of your energy use in terms of your transportation. So instead of looking at large amounts of energy needed for each person in this room to get around in a city, now you can look at much smaller amounts and more sustainable transportation.
04:01	So next time you think about a vehicle, I hope, like us, you're thinking about something new.
04:06	Thank you.
04:07	(Applause)