**Conclusion**

For question 1. We use the polynomial fitting to find the pattern of “usage of electricity” and predict that it will become 1.889\*10^11 in 2022. For our model 2, we build a model to find the relationship between the energy consumption and the consumer number in order for shops to know the number of EV charge stations and plugs they need to build to satisfied consumer’s demand. Plus, we use a real place—A Starbucks in Swiss, as an example, to use our model to give them a plan about free charging devices—build 2 charging stations, 44 plugs, consume them 228kWh per day and 1740 for fixed cost. In model 3, we apply the model in question2 to a different situation—a university, and find MIT need to build 420 EV charging station and they will pay 885.218976 per day for free charging devices with 420000 fixed costs. In model 4, we build a model to find a way for the place where provide free charging services to gain benefits. As a result, for the coffee bar in question 2, they need to increase their commodity by 0.73 in order to recover their investment in one year.