Phone Price Prediction

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Description

We will be looking at features of mobile phones and how much they have sold for in the past and present. We hope to be able to identify key features from our dataset that seem to affect the price of a phone. A user will most likely need to input what kind of features they want in a phone, and our model will output the possible price of their hypothetical phone. Since getting a new phone is something we all do almost every few years, it's helpful to know what you can afford with your current budget. For example, if someone is looking for a better battery than their current one, but everything else they would like the same, then hopefully with our model, we will be able to give them a price for what they are looking for.

Data

We think that the best way to predict the price of a phone would be using some specific parameters that most customers look for when comparing phones. We thought about what we usually look for in a phone and our data parameters would look something similar to what is shown below.

Brand	OS	Size (in.)	Resolution	Battery	RAM(GB)	Storage(GB)	Weight(g)	Target (Price)
Apple	iOS 11	4.7	750x1334	1821	2	64	148	$210
Samsung	Android 7.1	5.5	1080x1920	3000	4	32	180	$550

There may be some features that we can ignore depending on how much they seem to influence the target (phone price). We may also add other features that aren't listed above so that we can ensure the data is useful in predicting the price of a phone.

Gathering Data

The retail value of phones can be found searching on the web, and we will most likely turn to the internet when we begin gathering our data. However, the majority of our raw data can be found at the following URL:
https://www.kaggle.com/datasets/berkayeserr/phone-prices
On the kaggle website, it lists 22 features associated with phone prices. After reviewing its findings, we determined that we will most likely utilize only a part of the features described. This is because some of the features, like the name of a phone, won't have much effect on the model we choose to train and test our data. Also, the raw data

ranges from phones used in 2016-present, and we only want to use more recent data as phones depreciate in value over the years. If needed, we will look at current phone prices instead of the phone’s price announced at its launch date.