Data-Market Proposal

Team 54

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Our application is a database market, where anyone can buy, sell or commission datasets. Data is incredibly valuable, but even today it is difficult to quickly find high quality data, such as scientific results, medical records, labeled images, or financial documents. Data of this nature is necessary for many commercial applications in a diverse array of industries. For example, engineers building a self-driving car need labeled road videos to test whether their computer vision algorithms provide optimal solutions in different road environments. The goal of our application is to decrease the barriers of trading data.

For many users, buying or commissioning data from others will often be cheaper and far less time consuming than if they created the data themselves. Smaller groups (such as startups and researchers), who do not have enough money to buy data on their own, will be able to pool their money with others to commission a dataset. This market will also provide owners of raw data a platform to profit from their data assets. Valuable raw data is often left locked away from the public because the owner has no incentive to share it; our website provides this incentive and puts the data to productive use.

Authentication and Profiling

Users will need to login to a personal account, which we authenticate, before they can post or purchase datasets. New users will need to create an account where they initially set a username and password, and can later provide their names, descriptions, affiliations, email addresses, phone numbers, and profile photos. They will be able to update their information as necessary and view the profiles of other users who post datasets. Frequent users who have had successful interactions will get a certification of quality from the website.

User Privileges

There are two type of users, regular users and the administrators. Regular users can access the Buy and Sell pages, upload/update/delete their own dataset and profile pages, and see other's profiles. Buyers have the ability to use a search function to locate the datasets they want with search conditions such as type of data, dataset size, price range, etc. When they want to know more about a dataset, they can contact the seller through our site. After payment, the seller

will add the buyer to a list of users who have permission to access their data; a download link will now become visible to the buyer. Currently, we assume all transactions will occur offline, but online transaction features may be added (potentially using cryptocurrencies). In the future, the application will not only connect buyers and sellers, but also mediate their transactions to facilitate greater trust in the marketplace.

Administrators have all the capabilities of regular users with some additional privileges. An admin has complete access to all data resources and can view or modify user account information. For example, they can reset user passwords or update/delete user profiles if the profile is a nuisance. They can also delete datasets at their own discretion for any reason, including for privacy concerns. Admins must be experienced at handling data and must understand whether a posted dataset is ethical and valuable to users.

Data

The tradeable datasets will be stored and handled by our application. When users upload or update datasets, they will transmit their files from their local computer to our remote server. When the seller permits a buyer to use their data, the buyer can access a download link and pull the purchased dataset to their local disk. User accounts will be another type of data stored on our application's server. We will keep track of all profile information, and also users' interaction histories with the website. When users or admins add/change/delete profile information through the site, the changes will be reflected in our application's database.

Views

Our applications includes five main views, attached below: a login/registration view, a browsing view listing brief information about all datasets/jobs, an information view detailing the specifics of a particular offer, a profile view, and an administrator control panel. Admins can visit the control panel, which gives them access to the application's database, through the site's primary navigation. Browsing, information and profile views will also have hidden icons that allow for their modification by admins. Admins will see these icons everywhere they exist, whereas regular users will only see them on their own profile and dataset pages.

Login View

Logo

Login

Username

Password

Login

Forgot your password?   Not a member? Sign up.

Footer / Secondary Navigation

Registration View

Logo

Registeration

Username

Password

Confirm Password

Register

Footer / Secondary Navigation

Browsing View - Buy

🏠 Buy | Sell   Search   ≡

Picture | Database Name
Database Description
▽

Picture | Database Name
Database Description
▽

Picture | Database Name
Database Description
▽

Picture | Database Name
Database Description
▽

Footer / Secondary Navigation

Browsing View - Sell

Buy | Sell

Search

| Picture | Project Name |
| | Project Description |

| Picture | Project Name |
| | Project Description |

| Picture | Project Name |
| | Project Description |

| Picture | Project Name |
| | Project Description |

Footer / Secondary Navigation

Data Information

Description

Data Preview

Size

Number of Instances
Type of Instances
Number of Features
Type of Features

Quality

Expected Error Rate
Expected Bias
Expected Mislabelling

Performance

Corss validation
scores on diferent
classical models

Price

Price comparison
with similar quality
datasets

Contact

Footer / Secondary Navigation

Buy Sell Search

Information View - Sell

Buy | Sell

Search

Project Name

Picture

Information about the commissioners, the price they are willing to pay, and what they need specifically

Technical Requirements

Possible example of the type of data the comissioners need

Contact

Project Name

Picture

Project Description

Footer / Secondary Navigation

Profile View
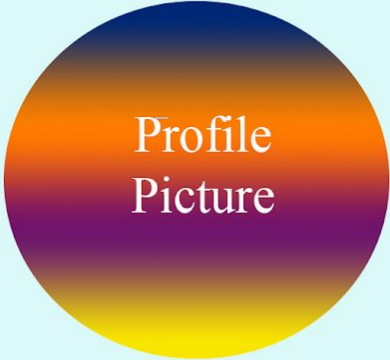
Adminstrator Control Panel

Buyer Meta-Information	Seller Meta-Information
Transaction Meta-Information	Data Meta-Information

Edit

Footer / Secondary Navigation