Ai-Team 15

Startup Success Predection.

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OBJECTIVE

The Main Objective of the Project is to build a regression model, that can predict the success rate of the startup by comparing the results and previous data of these.

Companies. Startup's.   Investments. Funding.

Investors

The people who generally investin a startup just through pitching

Business holders

The new business people who are willing to estabish a new business in less time.

Organizations

Other NGO organizations who generally donate for the startups.

Creative Employees

Not only money lenders but also the people who want to work by knowing will they get paid.

Events&Competetions

Startup event hosters can filter the startups in the comptetion.

Founder

The startup founder for himself can analyze whther how to get investment, he will fail or pass.

Data set insights

Marketing Labels	Founded at	Last funding at	Age First Funding
The number of marketing labels a company has	The year of the company was found at.	The time of the company when it received its last funding .	The age of the company when it received its first funding.

Age last funding	Age first Milestone	Participants	Top 500
Age of te company when it received its last funding.	Age of the company after it reached its first milestone.	The number of employees along with the founder and director within the company.	Is the company in top 500 list of existing companys or is it in the top 500 startups.

	labels	founded_at	first_funding_at	last_funding_at	age_first_funding_year	age_last_funding_year	age_first_milestone_year
0	1	1/1/2007	4/1/2009	1/1/2010	2.2493	3.0027	4.6685
1	1	1/1/2000	2/14/2005	12/28/2009	5.1260	9.9973	7.0055
2	1	3/18/2009	3/30/2010	3/30/2010	1.0329	1.0329	1.4575
3	1	1/1/2002	2/17/2005	4/25/2007	3.1315	5.3151	6.0027
4	0	8/1/2010	8/1/2010	4/1/2012	0.0000	1.6685	0.0384
...	...	...	...	...	...	...	...
918	1	1/1/2009	7/9/2009	7/9/2009	0.5178	0.5178	0.5808
919	0	1/1/1998	4/1/2005	3/23/2007	7.2521	9.2274	6.0027
920	0	1/1/1999	6/29/2007	6/29/2007	8.4959	8.4959	9.0055
921	1	1/1/2009	10/5/2009	11/1/2011	0.7589	2.8329	0.7589
922	1	1/1/2003	2/13/2006	2/13/2006	3.1205	3.1205	4.0027

922 rows × 23 columns

ML Models & Comparitive Results

ALGORITHM	ACCURACY RATE
KNN	0.72(72%)
SVC	0.70 (70%)
Decision Tree	0.89(89%)
Random Forest	0.9(90%)
Logistic regression	0.9(90%)

KNN

```python
from sklearn.neighbors import KNeighborsClassifier
classifier = KNeighborsClassifier()
classifier.fit(X_train, y_train)
y_pred = classifier.predict(X_test)
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
print(cm)
from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred)
```

```
.. [[174   0]
 [  1 100]]
```

SVC

```python
from sklearn.svm import SVC
classifier = SVC(kernel = 'linear', random_state = 0)
classifier.fit(X_train, y_train)
y_pred = classifier.predict(X_test)
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
print(cm)
from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred)
```

```
[[174   0]
 [  0 101]]
1.0
```

Logistic regression

```python
from sklearn.linear_model import LogisticRegression
log_reg = LogisticRegression()
log_reg.fit(X_train, y_train)
y_pred_via_log_reg = log_reg.predict(X_test)
from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred_via_log_reg)
```
```
.04]   ✓  0.4s
... 0.9090909090909091
```

DecisionTreeClassifer

```python
from sklearn.tree import DecisionTreeClassifier
classifier = DecisionTreeClassifier(criterion = 'entropy', random_state = 0)
classifier.fit(X_train, y_train)
y_pred = classifier.predict(X_test)
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
print(cm)
from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred)
```
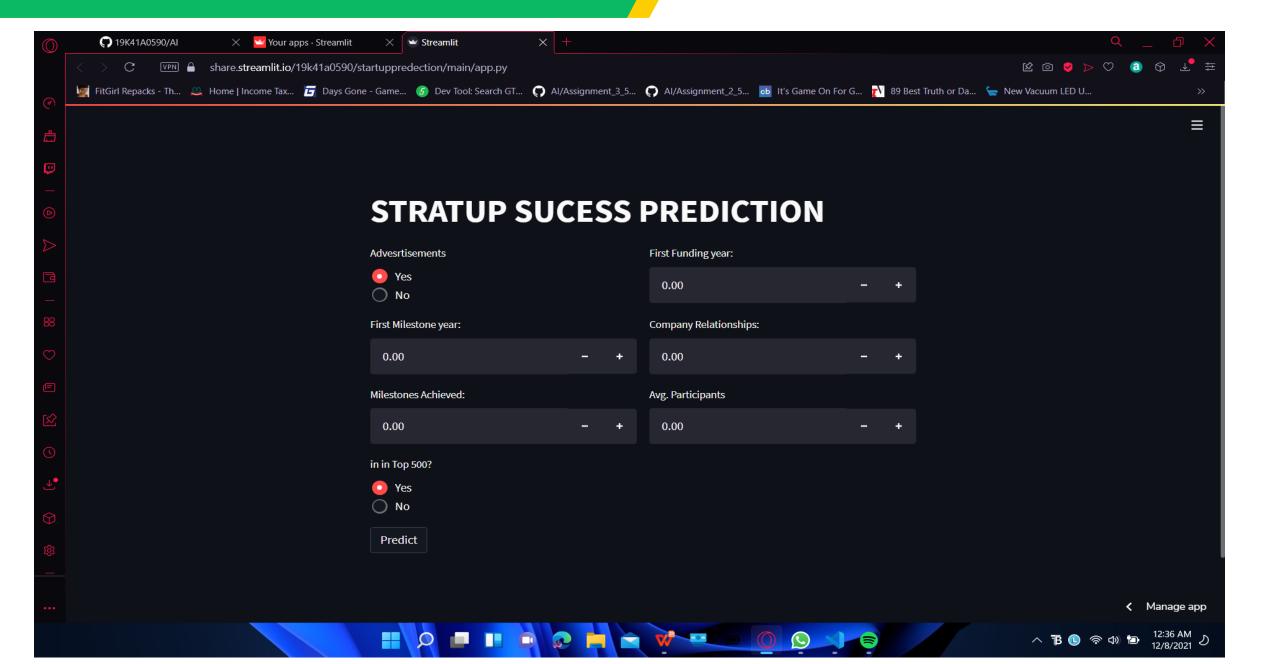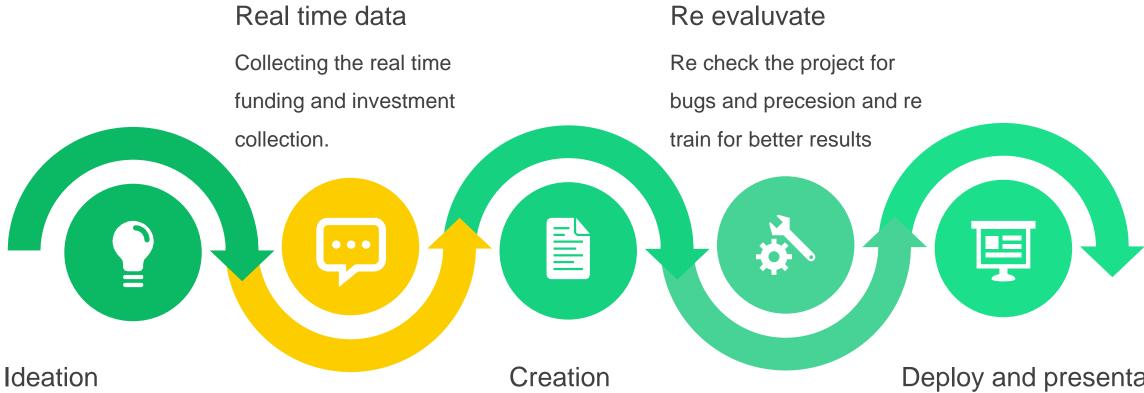
```
[[174   0]
 [  0 101]]
1.0
```

Logistic regression

Random forest Classifer

```python
from sklearn.ensemble import RandomForestClassifier
classifier = RandomForestClassifier(n_estimators = 10, criterion = 'entropy', random_state = 0)
classifier.fit(X_train, y_train)
y_pred = classifier.predict(X_test)
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
print(cm)
from sklearn.metrics import accuracy_score
print(accuracy_score(y_test, y_pred))
```

```
[[174   0]
 [  0 101]]
1.0
```

Application Demonstration

Future Scope.

Real time data

Collecting the real time funding and investment collection.

Re evaluvate

Re check the project for bugs and precesion and re train for better results

Ideation

New format of ui rate of success display

Creation

Making the project based on the real time data.

Deploy and presentation

Make the project gloabal and user freindly .