

# StartUp Fate Detector

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# The Inputs: DataSets

STATE_CODE	AGE_FIRST_FUNDING_YEAR
LATITUDE	AGE_LAST_FUNDING_YEAR
LONGITUDE	AGE_FIRST_MILESTONE_YEAR
ZIP_CODE	AGE_LAST_MILESTONE_YEAR
CITY	RELATIONSHIPS
NAME	FUNDING_ROUNDS
LABELS	'FUNDING_TOTAL_USD
FOUNDED_AT	MILESTONES
CLOSED_AT	CATEGORY_CODE
FIRST_FUNDING_AT	HAS_VC
LAST_FUNDING_AT	
HAS_ANGEL	
HAS_ROUND_A	
HAS_ROUND_B	
HAS_ROUND_C	
HAS_ROUND_D	
Avg_Participants	
Is_Top500	
Status	

# The Shape (923, 45)

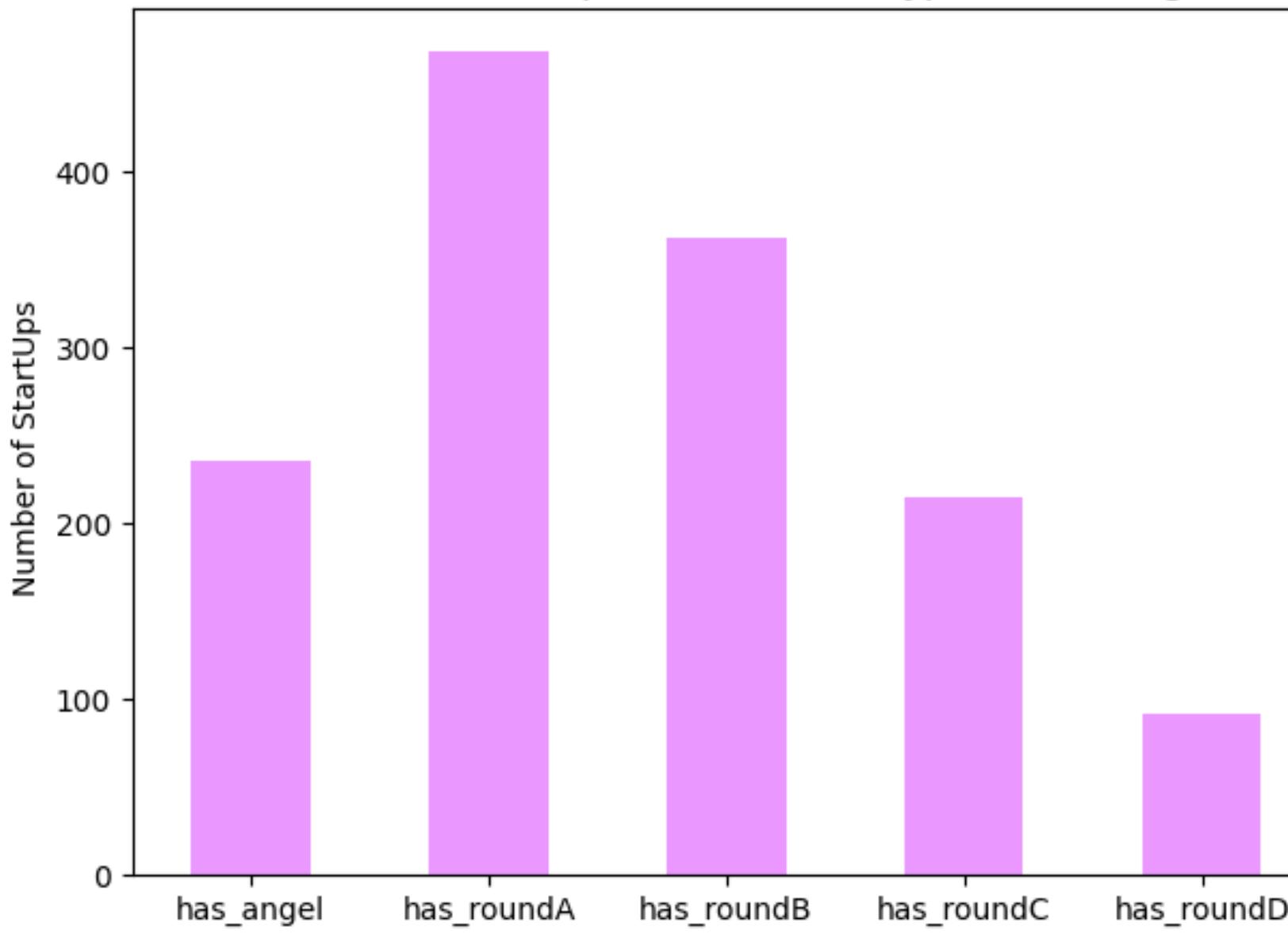
	name	status_encoded	founded_at	closed_at	first_funding_at	last_funding_at	age_first_funding_year	age_last_funding_year	age_first_milestone_year	age_last_milestone_year	relationships	funding
0	Bandsintown	1	2007-01-01	0	4/1/2009	1/1/2010	2.2493	3.0027	4.6685	6.7041	3	
1	TriCipher	1	2000-01-01	0	2/14/2005	12/28/2009	5.1260	9.9973	7.0055	7.0055	9	
2	Plixi	1	2009-03-18	0	3/30/2010	3/30/2010	1.0329	1.0329	1.4575	2.2055	5	
3	Solidcore Systems	1	2002-01-01	0	2/17/2005	4/25/2007	3.1315	5.3151	6.0027	6.0027	5	
4	Inhale Digital	0	2010-08-01	10/1/2012	8/1/2010	4/1/2012	0.0000	1.6685	0.0384	0.0384	2	
...	...	...	...	...	...	...	...	...	...	...	...	...
918	CoTweet	1	2009-01-01	0	7/9/2009	7/9/2009	0.5178	0.5178	0.5808	4.5260	9	
919	Reef Point Systems	0	1998-01-01	6/25/2008	4/1/2005	3/23/2007	7.2521	9.2274	6.0027	6.0027	1	
920	Paracor Medical	0	1999-01-01	6/17/2012	6/29/2007	6/29/2007	8.4959	8.4959	9.0055	9.0055	5	
921	Causata	1	2009-01-01	0	10/5/2009	11/1/2011	0.7589	2.8329	0.7589	3.8356	12	
922	Asempra Technologies	1	2003-01-01	0	2/13/2006	2/13/2006	3.1205	3.1205	4.0027	4.0027	4	

923 rows × 39 columns

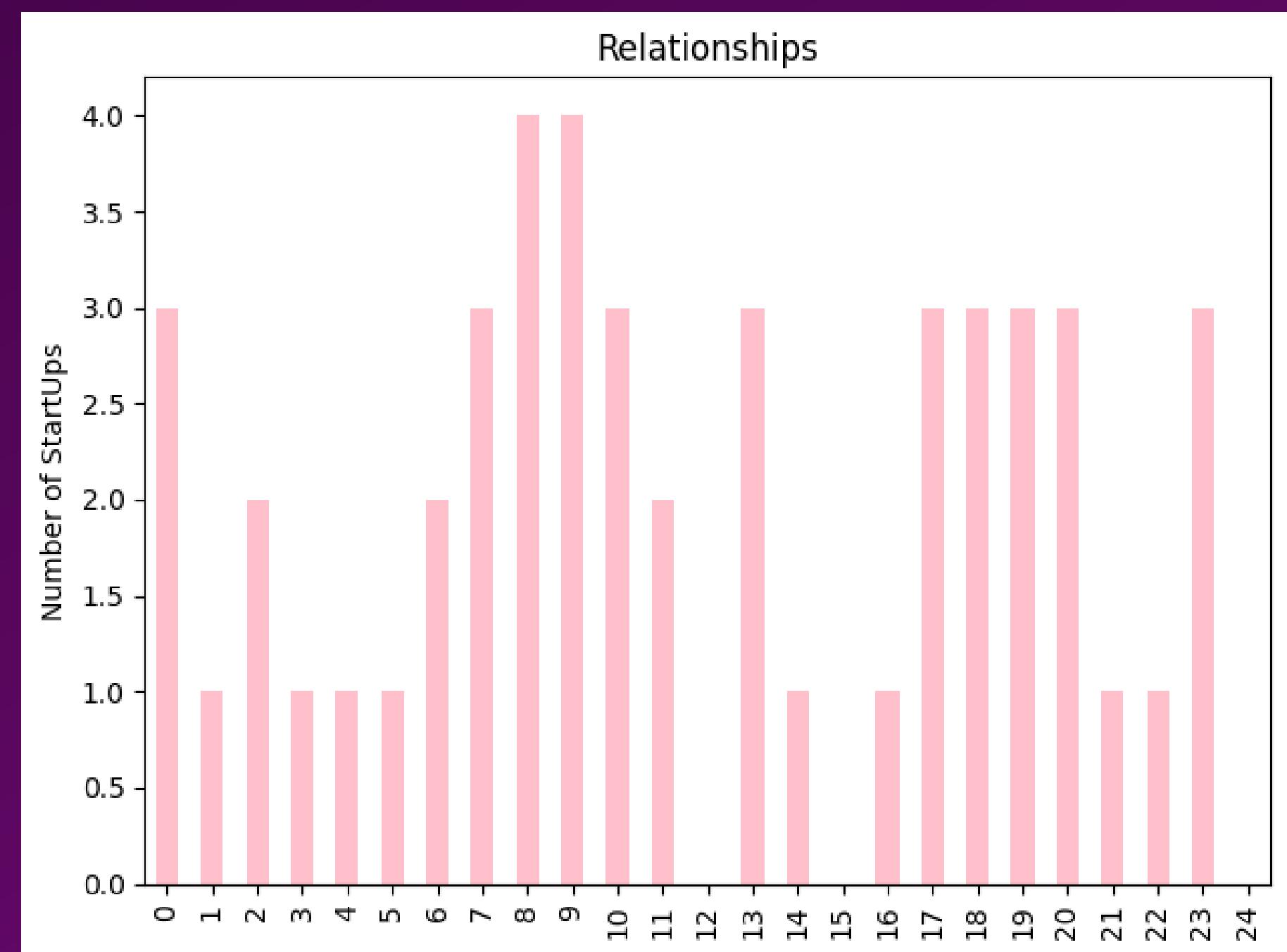
# THE INSIGHTS

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Number of StartUps with Different types of Funding

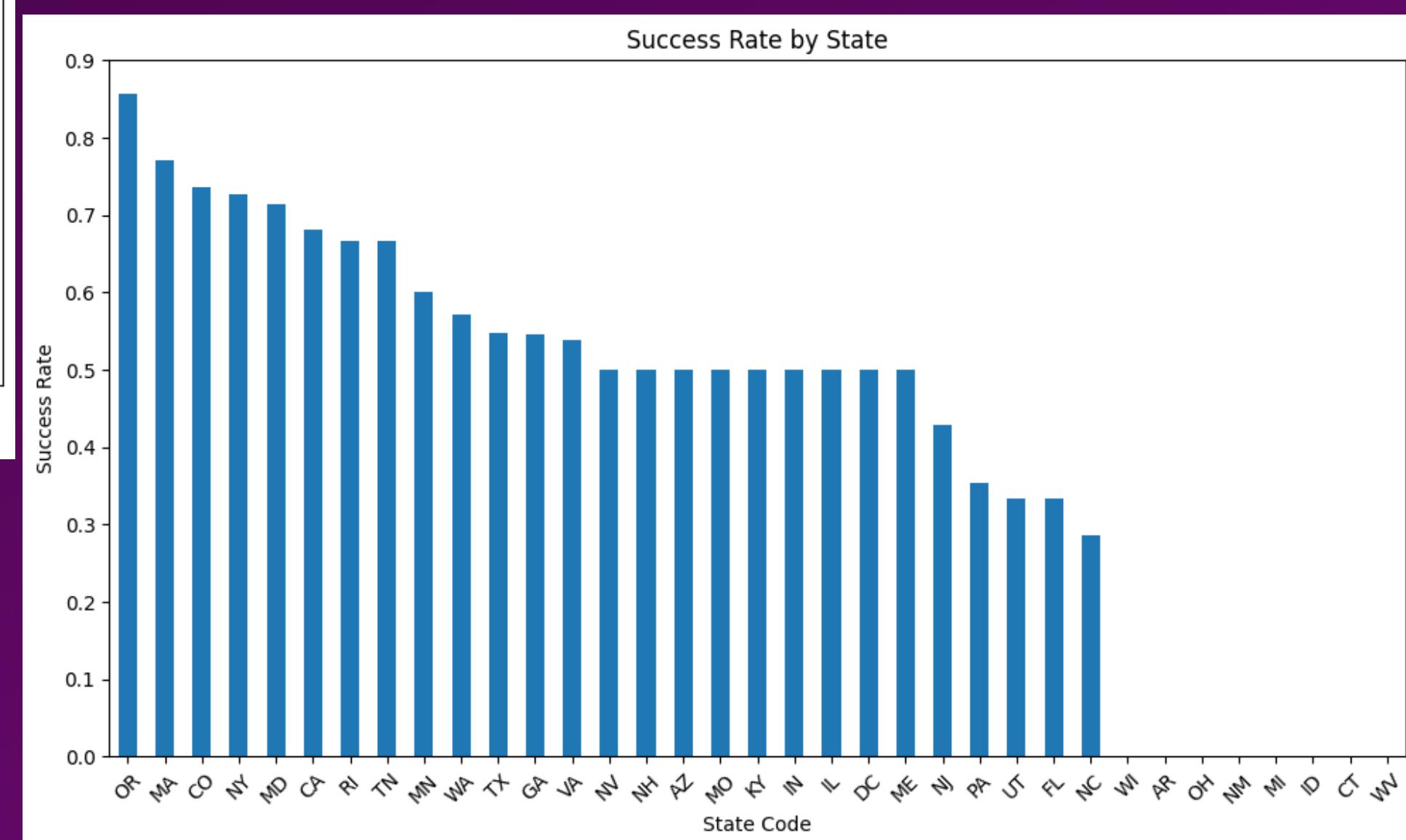
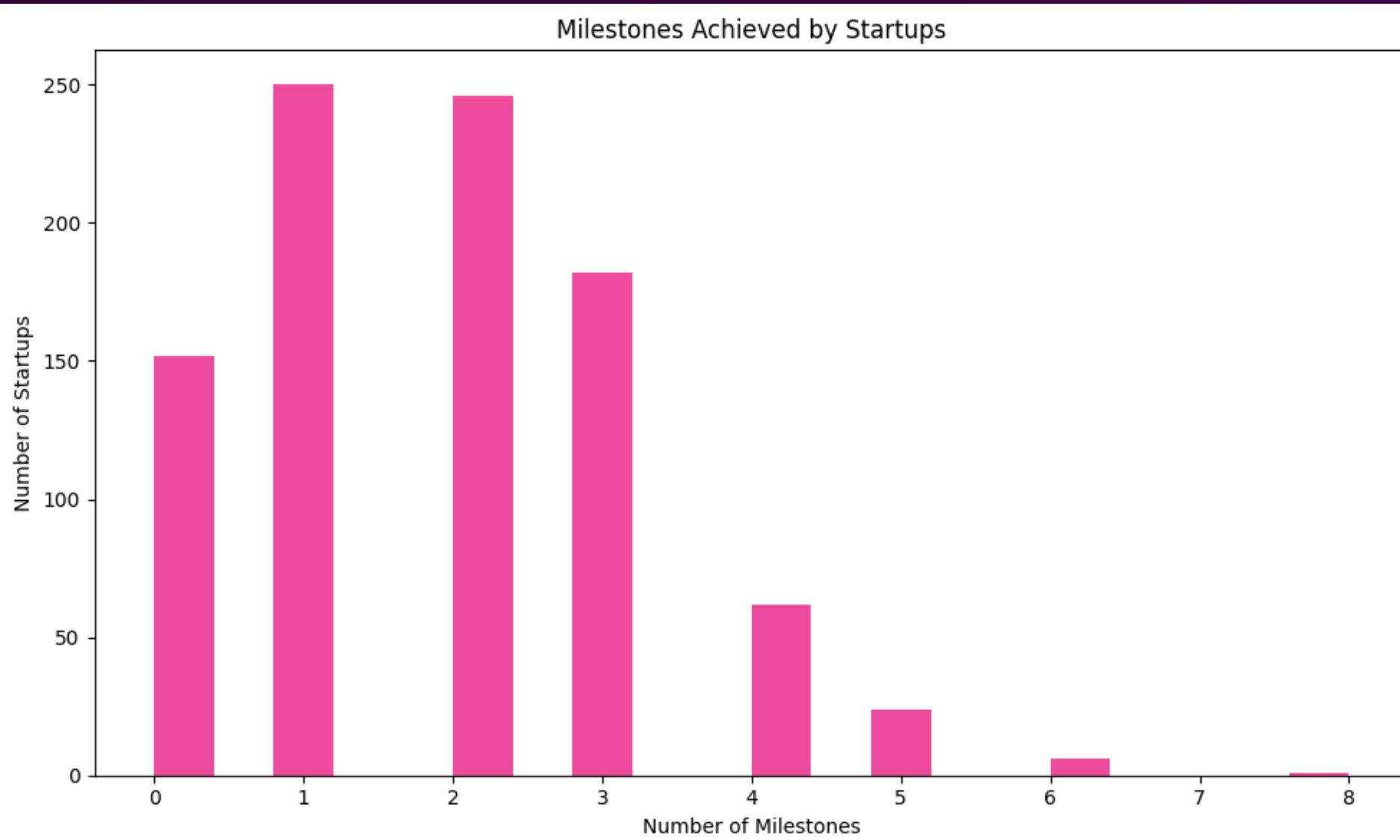


Relationships



# THE INSIGHTS

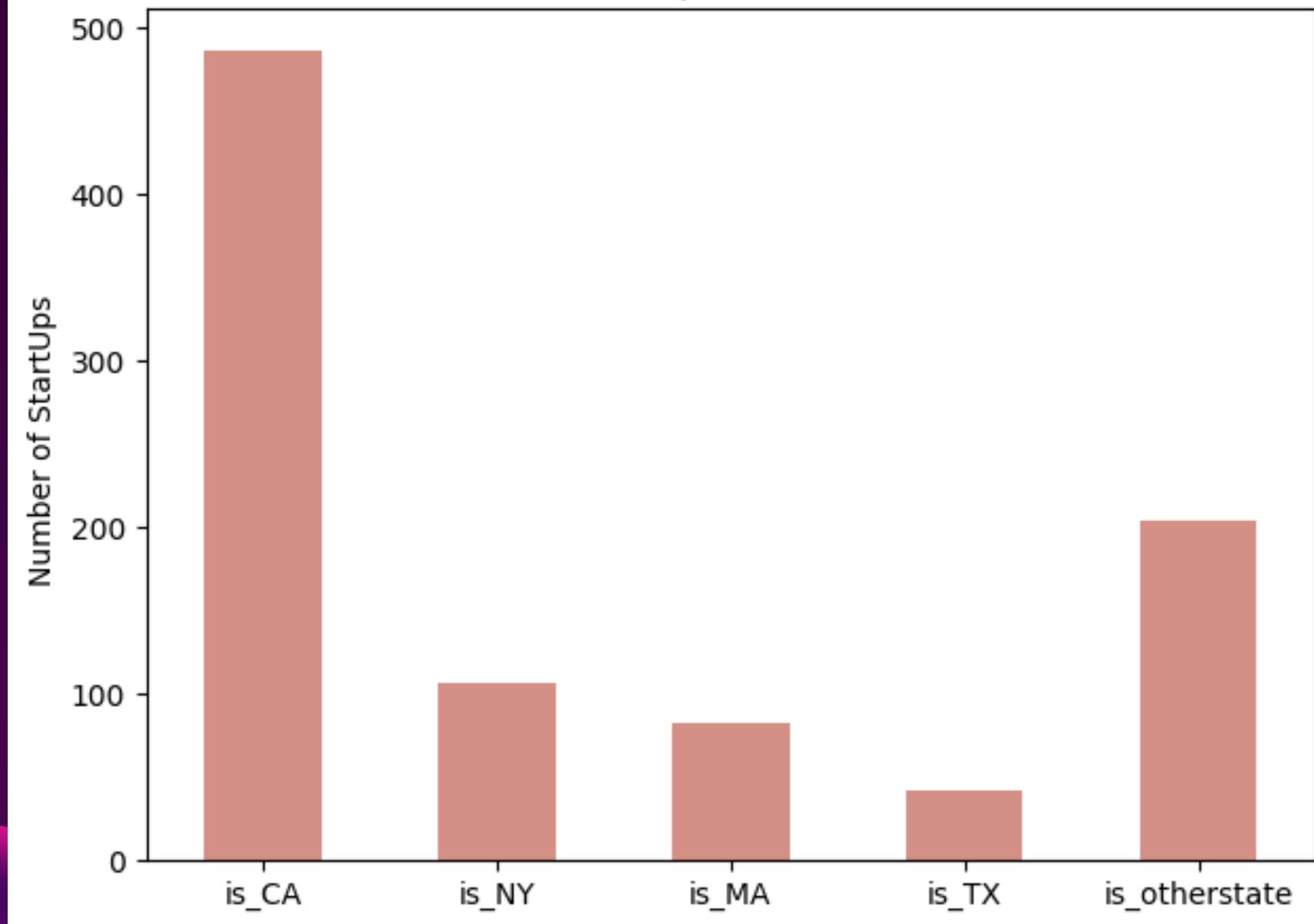
05



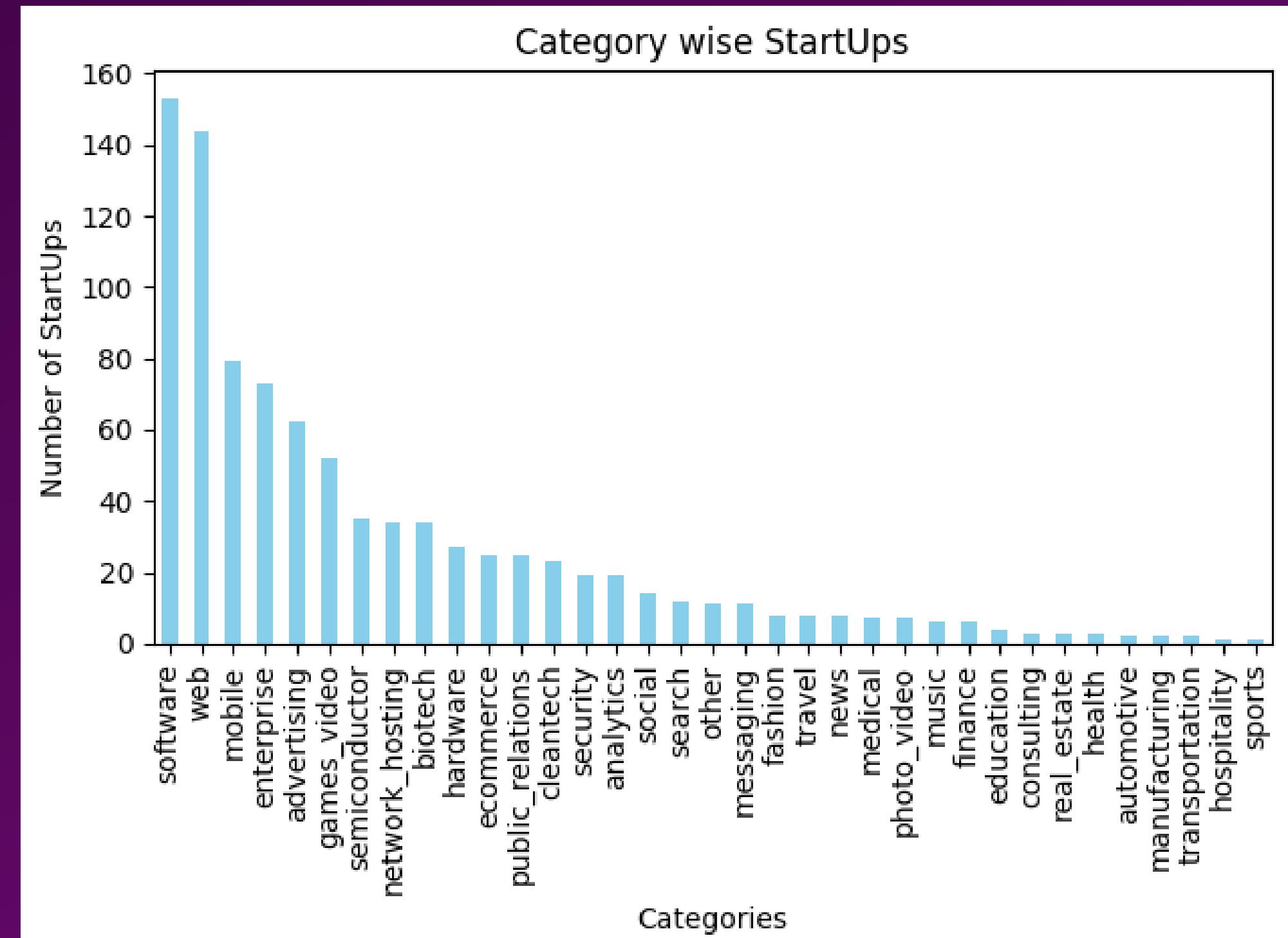
# THE INSIGHTS

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Number of StartUps from different states



Category wise StartUps



# The Model

```
# features to use for prediction
features = ['age_first_funding_year', 'age_last_funding_year', 'funding_total_usd', 'is_CA', 'is_NY', 'is_MA',
            'is_TX', 'is_otherstate', 'is_software', 'is_web', 'is_mobile', 'is_enterprise', 'is_advertising', 'is_gamesvideo',
            'is_ecommerce', 'is_biotech', 'is_consulting', 'is_othercategory', 'has_VC', 'has_angel', 'has_roundA', 'has_roundB',
            'has_roundC', 'has_roundD', 'avg_participants', 'is_top500']

# Create a new column 'success' where 'Acquired' is 1 and 'Closed' is 0
df['success'] = df['status_encoded'].apply(lambda x: 1 if x == 1 else 0)

# Select features and target variable
X = df[features]
y = df['success']

# Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Create and train a Random Forest Classifier
model = RandomForestClassifier(random_state=42)
model.fit(X_train, y_train)

# Predict the success status on the test set
y_pred = model.predict(X_test)

# Generate a classification report
report = classification_report(y_test, y_pred)
print(report)
```