

Startup Investment Analysis: Shark Tank India

Project Report (Based on Season 1 Data)

Abstract

This report details the comprehensive data analysis project conducted on the investment data from Shark Tank India Season 1. The primary objective was to uncover key investment trends, measure pitch success rates across various industry domains, and analyse investor (Shark) preferences and financial metrics. The analysis utilized Python for data preparation and metric calculation, followed by Tableau for dynamic visualization. Key findings include a high average success rate in Tech and Fashion domains (66.7%), an average deal size of 39.03 Lakhs INR, and the identification of Aman and Peyush as the most active investors by deal volume.

1. Introduction

The "Startup Investment Analysis" project aims to transform raw pitch data into actionable insights regarding venture funding in India. By cleaning, categorizing, and analysing the dataset, this project provides a data-driven overview of the types of businesses, financial figures, and investor behaviours that correlate with securing a deal. The ultimate output is a professional report and a dynamic dashboard showcasing key performance indicators (KPIs).

2. Tools Used

- Python (Pandas, NumPy): Used for initial data import, extensive cleaning (standardizing investment/equity columns, handling missing values), and creating the crucial Domain and Deal Status columns.
- Excel: Used for data check and analyse format
- Tableau Desktop/Public: Utilized for the final Data Visualization phase, creating dynamic charts and a professional dashboard

3. Steps Involved in Building the Project

The project was executed in four distinct phases:

3.1. Data Sourcing and Preparation

- Imported the ShartankIndiaAllPitches.csv dataset into a Python Pandas Data Frame.
- Standardized column names and converted the Equity field from a string to a numerical float
- Generated the binary Deal Status column (Deal/No Deal) based on the Investment Amount.

3.2. Feature Engineering (Domain Categorization)

- A custom function was developed in Python to categorize pitches into six standardized industry domains (e.g., F&B, Tech, Fashion, Home & Lifestyle) based on the Idea description. This standardization was critical for high-level trend analysis.

3.3. Core Analysis and KPI Calculation

Key financial and success metrics were calculated:

- Domain Success Rate: Percentage of pitches securing a deal per category.
- Average Deal Metrics: Mean investment amount and equity given up in successful deals.
- Investor Activity: Total deal counts for each Shark and their domain-specific preferences.

3.4. Visualization (Tableau Dashboard)

Four key visualizations were created to represent the findings:

1. Pitch-to-Deal Success Rate by Industry Domain (Bar Chart)
2. Average Investment Amount in Successful Deals (Area Chart)

3. Investor Deal Volume by Industry Sector (Heatmap)
4. Top 10 Brands by Total Investment Secured (Bar Chart) 2

4. Key Findings and Analysis

4.1. Deal Metrics and Success Rate

The analysis of 57 successful deals yielded the following average financial metrics:

- Average Investment Amount Secured: 39.03 Lakhs INR
- Average Equity Given Up by Founder: 16.43%

The success rate analysis revealed high investment consistency in niche domains:

Table 1: Pitch Success Rate by Domain (Top 3)

Domain	Success Rate (%)
Tech, App & E-commerce	66.67
Fashion & Apparel	66.67
Home & Lifestyle	66.67

4.2. Investor Activity and Preference

Investor activity (based on total deals) shows a clear hierarchy, with Aman and Peyush being the most active participants.

Table 2: Total Successful Deals Made by Each Shark

Shark	Total Deals Made
Aman	28
Peyush	27
Anupam	24
Namita	22
Ashneer	21
Vineeta	15
ghazal	7

The Heat map visualization confirms that while all Sharks heavily invest in the "Miscellaneous" category, Aman shows the strongest focus on core sectors like F & B and Tech, and Peyush dominates Tech investments.

5. Conclusion

The project successfully established a comprehensive framework for analysing startup investment performance. The findings indicate that while the average investment size is modest, founders in the Tech, Fashion, and Home & Lifestyle sectors have a significantly higher probability of closing a deal compared to the overall average. The visualizations (especially the Heatmap) provide crucial evidence that Aman Gupta and Peyush Bansal are the most voluminous investors, though most of all investment activity is concentrated in general, D2C-focused products categorized as 'Miscellaneous'. The successful completion of the four-chart dashboard provides a complete, visual summary of the entire analysis, fulfilling all project requirements.