IAF BUSINESSES AND INNOVATION SYMPOSIUM (E6)
Entrepreneurship Around the World (4-GTS.1)

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WHAT IT TAKES TO START A SUCCESSFUL SPACE COMPANY : A DATA-DRIVEN ANALYSIS OF ENTREPRENEURS IN THE SPACE INDUSTRY

Abstract

The democratization of outer space, through cheaper launches and widely-encouraged government-commercial partnership, has transformed the industry in the past decade. As of 2025, there are over 12,000 privately owned organizations developing spacecrafts, launch vehicles, satellites and other technologies and services. The success of these space startups is often attributed to their business model, product-market fit and the state of the industry at the time. However, another key factor in determining a company's success - one that is widely considered in the Silicon Valley environment - is the composition and capabilities of the founding team. This study explores how the background, prior expertise and demographic characteristics of space entrepreneurs influence their organization's success.

With the intent of uncovering trends and identifying the most influential attributes, a dataset of 716 existing mid to high tier startups was compiled. It captures the educational background, age, gender, geographical location and prior industry experience of the founding team. The data was sourced from existing literature, open-access repositories, and publicly available information on platforms like LinkedIn and Wikipedia. Explorative and predictive modelling techniques were then employed to answer key questions. Data visualization helped identify trends and anomalies, and Cluster Analysis was used to group the founders based on shared traits. Decision Tree models were then utilized to identify the most influential attribute in the dataset and prepare a predictive analysis of how likely an individual would be to start a successful space company.

This study revealed significant disparities in both gender and geographical distribution within the dataset, with a clear dominance of male founders with college education and previous space or aviation experience, based in the United States. On the predictive modelling side, despite the vast trade-space of other attributes and inherent uncertainty in analysis of booming startups, the model itself offers valuable insights into the likelihood of success for potential founders. Overall, the skewed nature of the findings underscores the need for accessible STEM education and policies to support a more diverse entrepreneurial ecosystem.