

Trends in Aerospace and Defense

By Brady Katler,

[Github Repository](#)

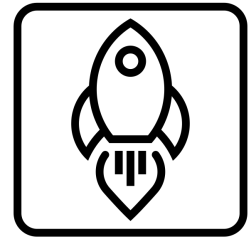
My goal is to generate insights from stock and product data to create actionable insights



Created by Vior
from Noun Project

Stock data will help give an overview of which companies are successful and why

Product data will indicate which products to sell and customers to target



Created by Pham Duy Phuong Hung
from Noun Project

Key Program Features

- **Duration:** 12 weeks during the summer months (June-August)
- **Location:** Based at our Los Angeles office
- **Internship Opportunities:** Business Operations, Finance, Human Resources, Marketing, Strategy, Sales, and Supply Chain Management
- **Paid Internship:** \$20- \$30 an hour based on education level
- **Mentorship:** Receive guidance and mentorship from industry leaders and experienced professionals
- **Professional Development:** Participate in workshops, seminars, and networking events designed to enhance your skills and knowledge
- **Project Work:** Engage in project-based work that contributes to FDH Aero's strategic goals and initiatives
- **End-of-Internship Presentation:** Showcase your contributions and learnings in a presentation to the leadership team

Ideal Candidate Profile

- Currently enrolled in an accredited college or university, pursuing a degree relevant to the business areas of interest. (Marketing, Business Management, Engineering, Finance, Information Technology, Human Resources)
- Commit to a 12 week summer internship timeframe
- Have a cumulative GPA of 3.0 or higher, reflective of all college coursework
- Be currently enrolled and pursuing a Bachelors degree
- Ability to work full-time (40 hours per week) during the summer internship
- Demonstrated interest in the aerospace, supply chain and/or defense sector
- Strong analytical, technical, and problem-solving skills
- Excellent communication and teamwork abilities
- Eagerness to learn and adapt in a fast-paced environment
- Authorized to work in the United States

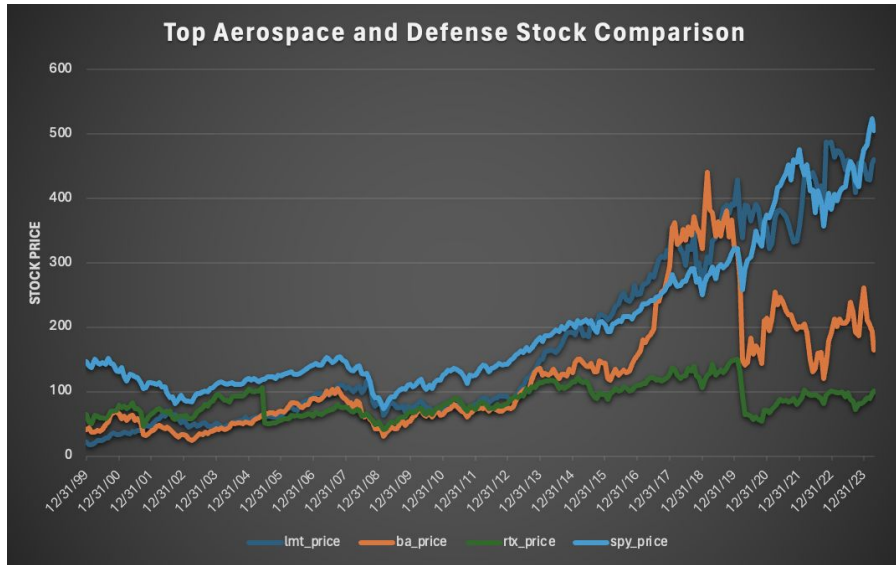
SOURCE 1: API DATA



API Data Generated using Alpha Vantage

- Provides Time Series Stock data
 - Monthly function was used to gather 25 years of stock data from Boeing, Lockheed Martin, and RTX
 - S&P 500 index used as benchmark for comparison
-

LMT rises high while other stocks see less growth compared to the S&P 500



- LMT 20x growth > SPY 3.5x growth
- Only 0.55 and 4x for BA and RTX, respectively
- Aerospace and Defense companies should look to emulate LMT → increased profits

Stock growth has dramatically stunted since COVID

- LMT sees slight gains, all others decline relative to S&P 500
- Just slow recovery from COVID-19?
- Historical data projects positive future
- No need to be fearful yet - further investigation still required



SOURCE 2: WEB SCRAPE DATA

Orbital Launch Data from Gunther's Space Page

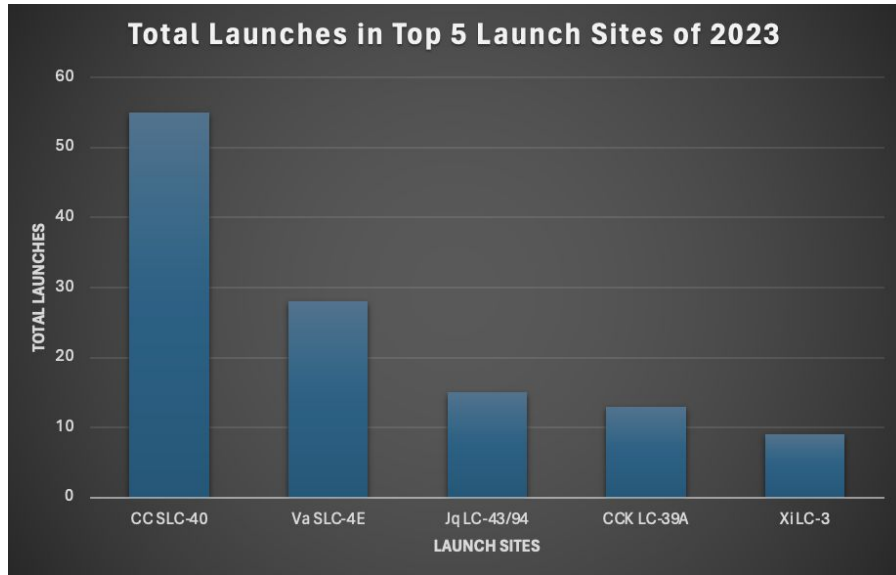
Choose detailed or compact view

☐ Detailed (all satellites listed individually)

☒ Compact (constellation launches with more than 3 identical satellites are summarized)

ID	Date	Payload(s)	Launch Vehicle	Site	Remark
January					
2023-001	03.01.2023	<div><div><div><div><div>YAM 5</div><div>Lynk Tower 03 (Lynk 08)</div><div>Lynk Tower 04 (Lynk 09)</div><div>Umbra-SAR 04</div><div>Umbra-SAR 05</div><div>EOS-SAT 1 (EOS Agrisat-1)</div><div>ICEYE X21</div><div>ICEYE X22</div><div>ICEYE X27</div><div>NuSat 32, ..., 35 (Albania 1, 2) ▾</div><div>Skykraft 1</div><div>Skykraft 1, ..., 4 ▾</div><div>Chimera LEO-1</div><div>ION-SCV 007 (Glorious Gratia, Second Star to the Right)</div><div>ION-SCV 008 (Fierce Franciscus, Second Star to the Right)</div><div>Astrocast 0401, ..., 0404 ▾</div><div>Futura SM1</div><div>Futura SM3</div><div>Kelpie 1 (AAC-AIS-SAT 1)</div><div>Sharjah-Sat 1</div><div>TAU-SAT 2</div><div>Orbiter SNT1</div><div>MDQSAT 1A (Juana Azurduy)</div><div>MDQSAT 1B (Simón Bolívar)</div><div>PROVES-Yearling</div><div>Sapling 1 (Sapling Sempervirens)</div><div>Unicorn 2G</div><div>Unicorn 2H</div><div>Vigoride 5</div><div>ZEUS 1</div><div>KSF 3A, ..., 3D ▾</div><div>Flock-4y 1, ..., 36 ▾</div><div>Lemur-2 157, ..., 162 ▾</div></div></div></div></div>	Falcon-9 v1.2 (Block 5)	CC SLC-40	some satellites failed to separate

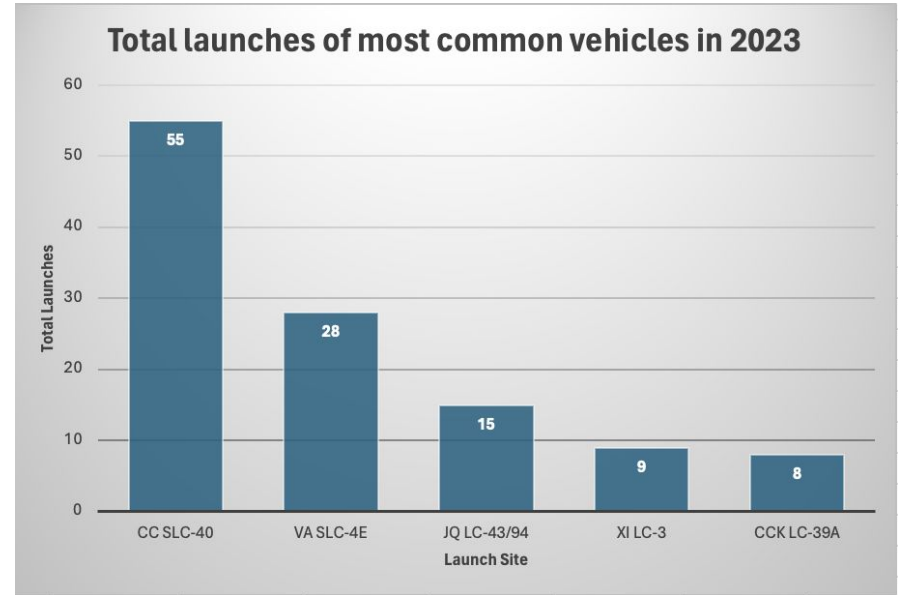
American Launch sites CC SLC-40 and VA SLC-4E lead all sites in launches



- 3 of top 4 locations are American, ~50% of total launches are American
- China is second by a large margin
- Target marketing + products to these sites and companies
- Would expect better sales

Most common vehicles show up in most common launch sites

- Falcon-9 and CZ launches
- Launch sites tend to use same vehicle family for most/all launches
- Get contracts selling most common vehicles to most common launch sites
- Would expect large demand, consistent profits



Although the aerospace and defense industry is still recovering from COVID-19, America and China remain top markets for investment with clear product needs