

Progetto Data Science

Studenti:

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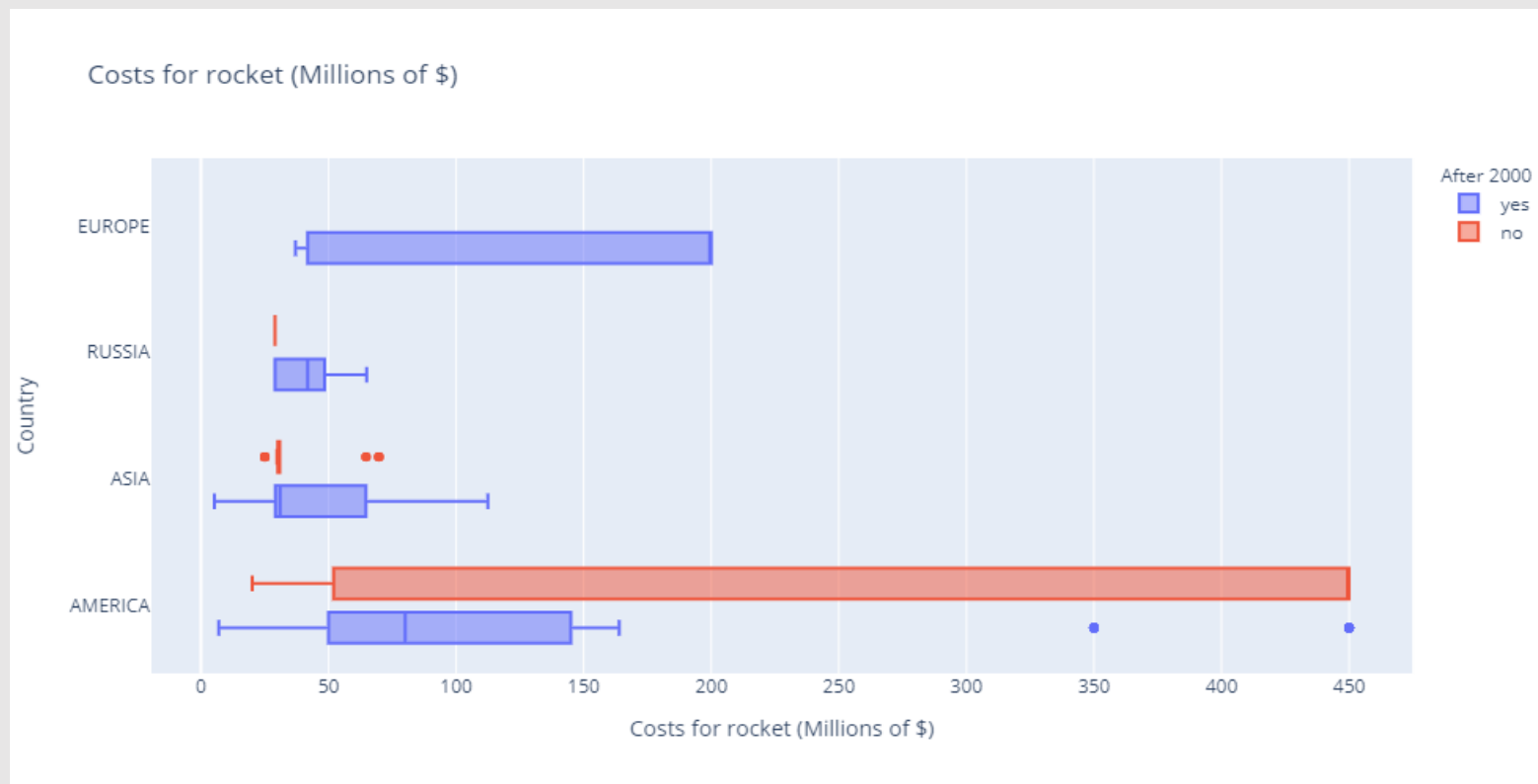
Introduzione e motivazione

- Dataset sui lanci spaziali dall'era spaziale ad oggi
- Scelta data dal contenuto del dataset e l'argomento
 - 4324 righe
 - 6 colonne
 - Stringhe, interi, date, indirizzi
 - Argomento di attualità

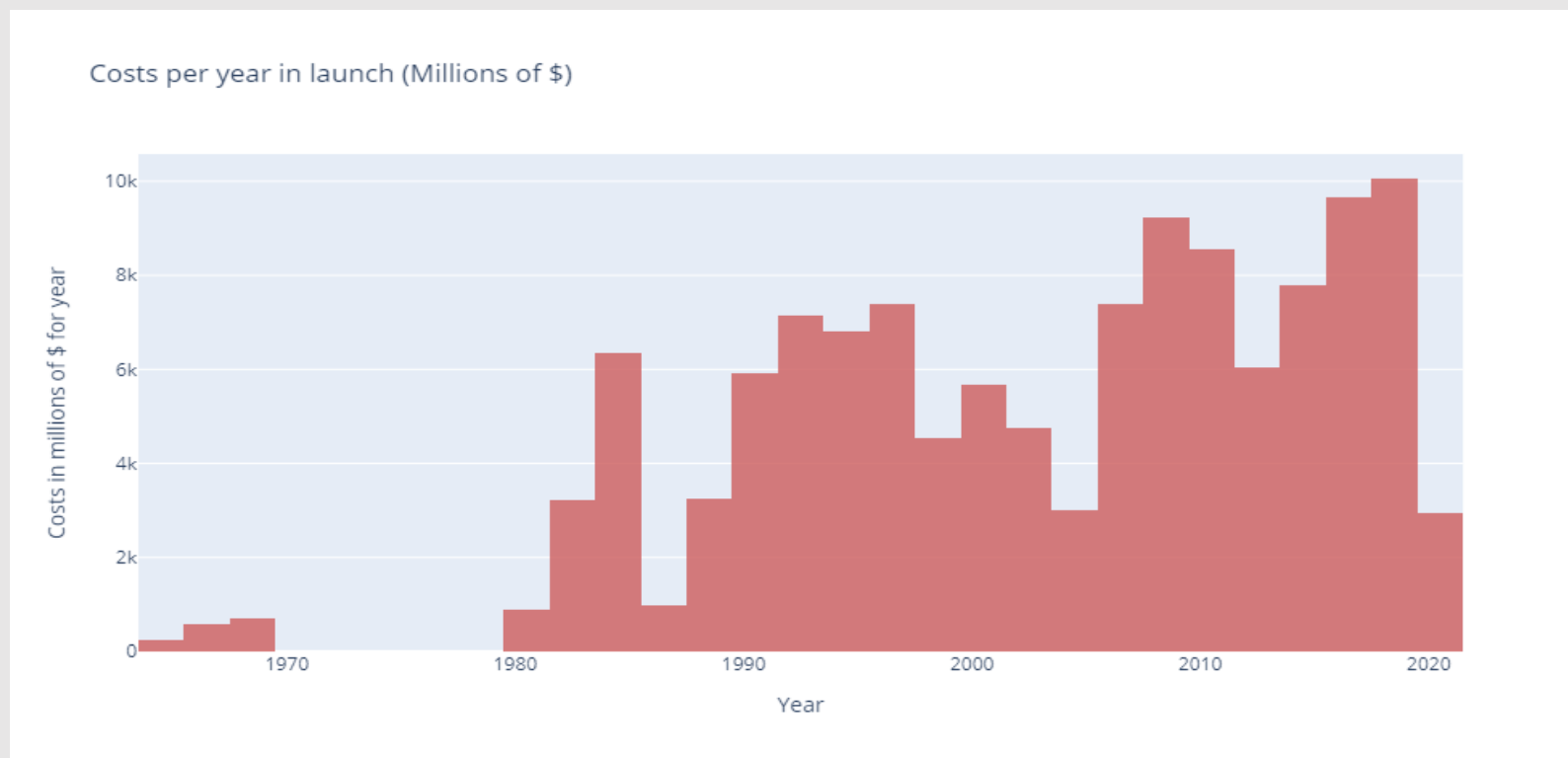
Un primo sguardo

	Company Name	Location	Datum	Detail	Status Rocket	Rocket	Status Mission	Country	Anno	Recente
0	SpaceX	LC-39A, Kennedy Space Center, Florida, USA	Fri Aug 07, 2020 05:12 UTC	Falcon 9 Block 5 Starlink V1 L9 & BlackSky	StatusActive	50.0	Success	AMERICA	2020	si
1	CASC	Site 9401 (SLS-2), Jiuquan Satellite Launch Ce...	Thu Aug 06, 2020 04:01 UTC	Long March 2D Gaofen-9 04 & Q-SAT	StatusActive	29.75	Success	ASIA	2020	si
2	SpaceX	Pad A, Boca Chica, Texas, USA	Tue Aug 04, 2020 23:57 UTC	Starship Prototype 150 Meter Hop	StatusActive	NaN	Success	AMERICA	2020	si
3	Roscosmos	Site 200/39, Baikonur Cosmodrome, Kazakhstan	Thu Jul 30, 2020 21:25 UTC	Proton-M/Briz-M Ekspress-80 & Ekspress-103	StatusActive	65.0	Success	RUSSIA	2020	si
4	ULA	SLC-41, Cape Canaveral AFS, Florida, USA	Thu Jul 30, 2020 11:50 UTC	Atlas V 541 Perseverance	StatusActive	145.0	Success	AMERICA	2020	si
...
4319	US Navy	LC-18A, Cape Canaveral AFS, Florida, USA	Wed Feb 05, 1958 07:33 UTC	Vanguard Vanguard TV3BU	StatusRetired	NaN	Failure	AMERICA	1958	no
4320	AMBA	LC-26A, Cape Canaveral AFS, Florida, USA	Sat Feb 01, 1958 03:48 UTC	Juno I Explorer 1	StatusRetired	NaN	Success	EUROPE	1958	no
4321	US Navy	LC-18A, Cape Canaveral AFS, Florida, USA	Fri Dec 06, 1957 16:44 UTC	Vanguard Vanguard TV3	StatusRetired	NaN	Failure	AMERICA	1957	no
4322	RVSN USSR	Site 1/5, Baikonur Cosmodrome, Kazakhstan	Sun Nov 03, 1957 02:30 UTC	Sputnik 8K71PS Sputnik-2	StatusRetired	NaN	Success	RUSSIA	1957	no
4323	RVSN USSR	Site 1/5, Baikonur Cosmodrome, Kazakhstan	Fri Oct 04, 1957 19:28 UTC	Sputnik 8K71PS Sputnik-1	StatusRetired	NaN	Success	RUSSIA	1957	no

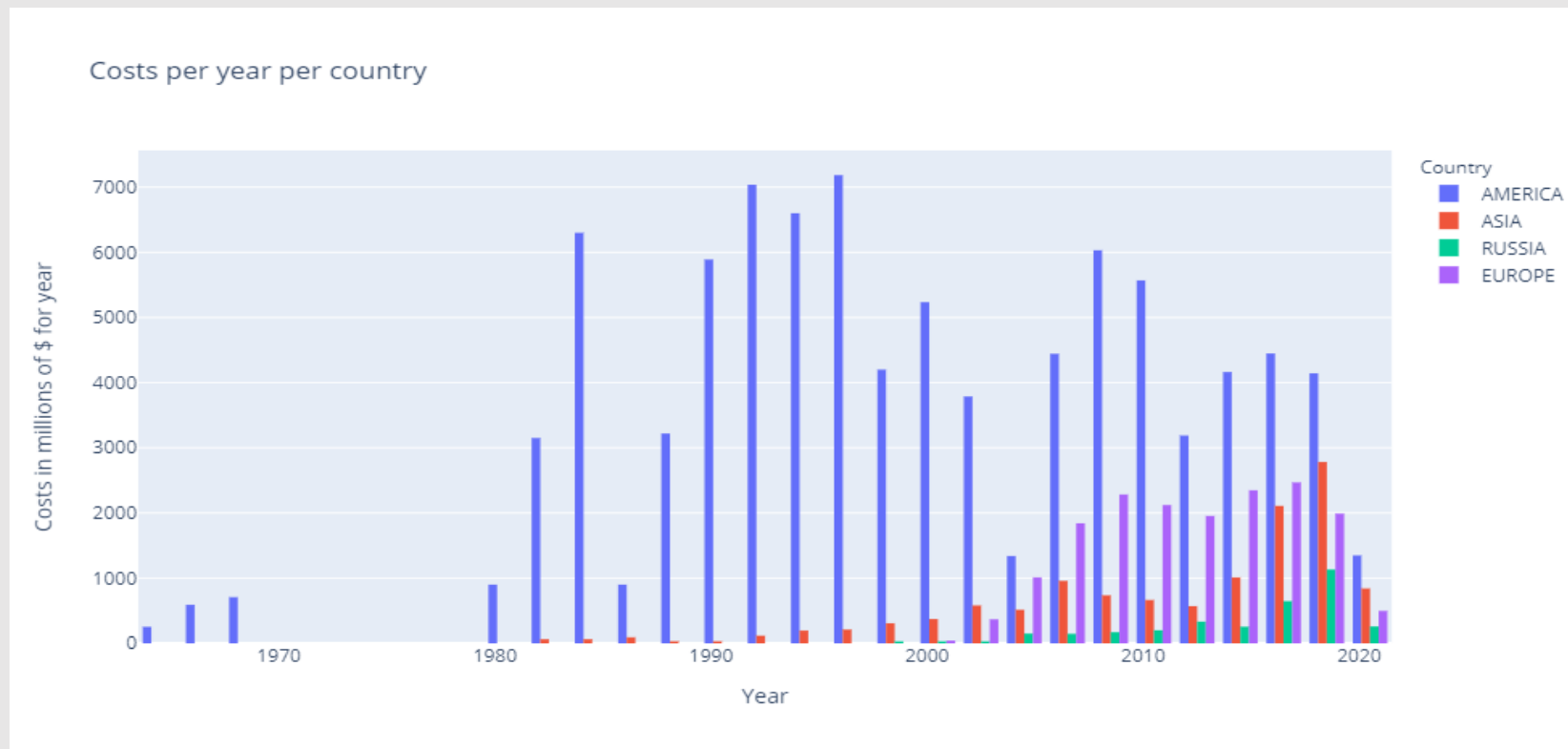
Analisi dei costi



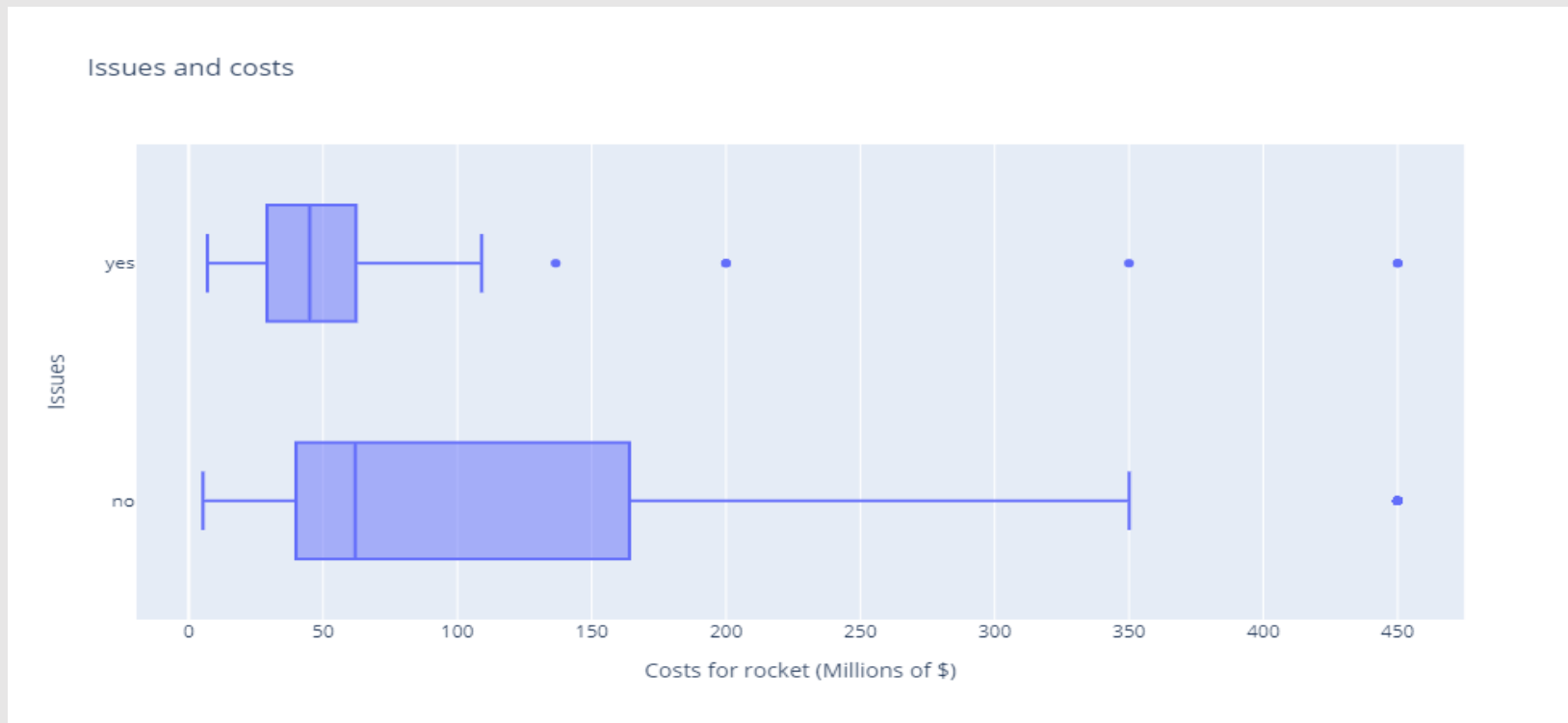
Analisi dei costi



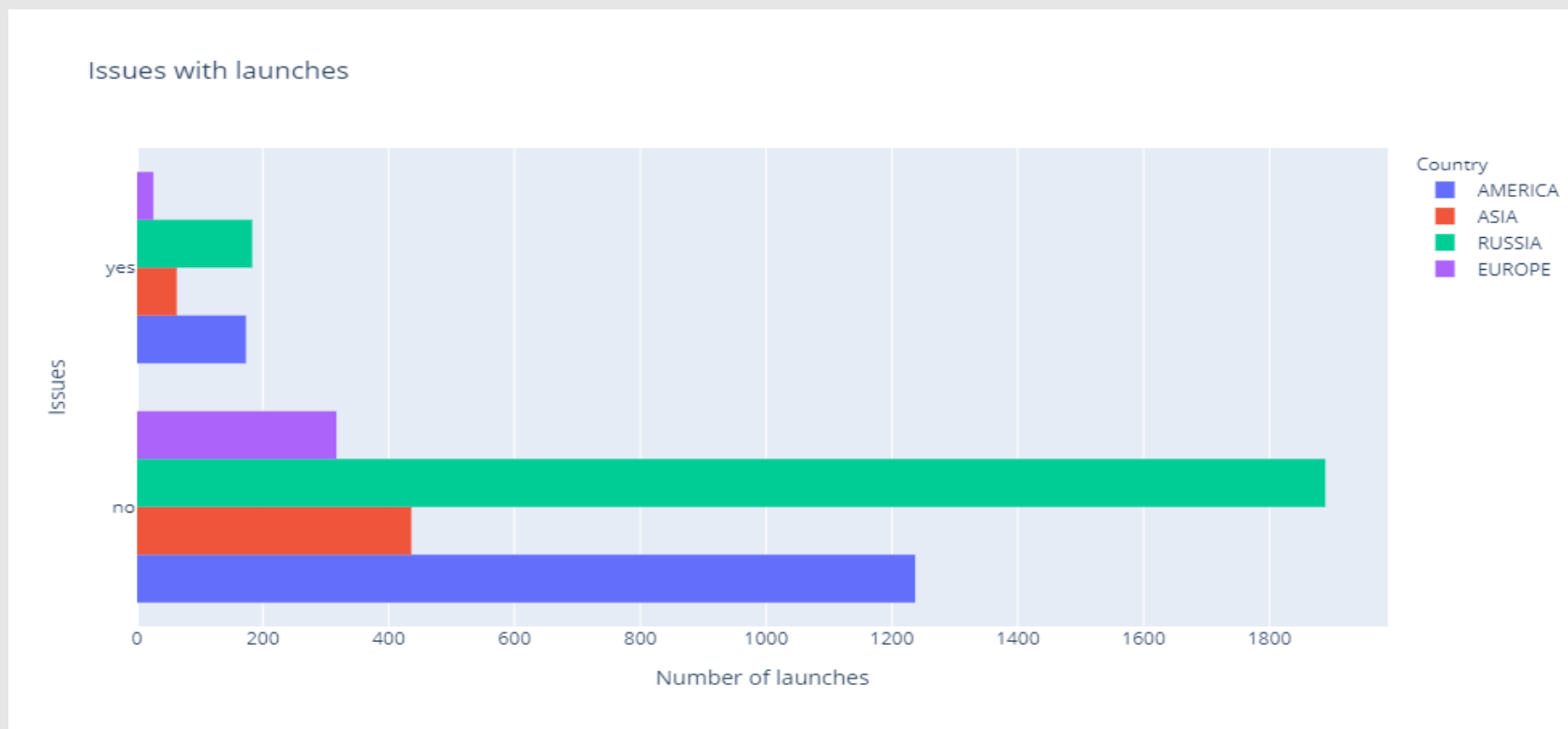
Analisi dei costi



Analisi fallimenti



Analisi fallimenti

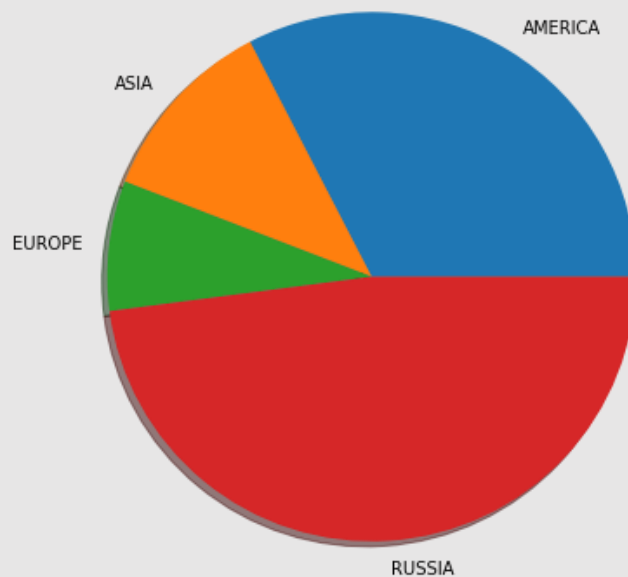


Analisi fallimenti

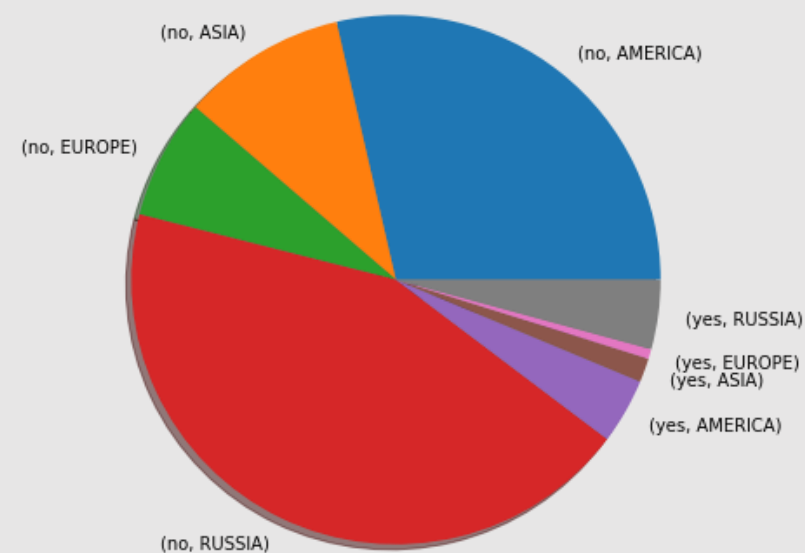
Number of issues for all lunches:



Number of launches per country:



Failures per country:



Analisi fallimenti

Number of issues for all lunches:

No → 3879 (89.71%)

Yes → 445 (10.29%)

Number of launches per country:

AMERICA → 1410 (32.61%)

ASIA → 499 (11.54%)

EUROPE → 343 (7.93%)

RUSSIA → 2072 (47.92%)

Failures per country:

No:

AMERICA 1237 (87.73%)

ASIA 436 (87.38%)

EUROPE 317 (92.42%)

RUSSIA 1889 (91.17%)

Yes:

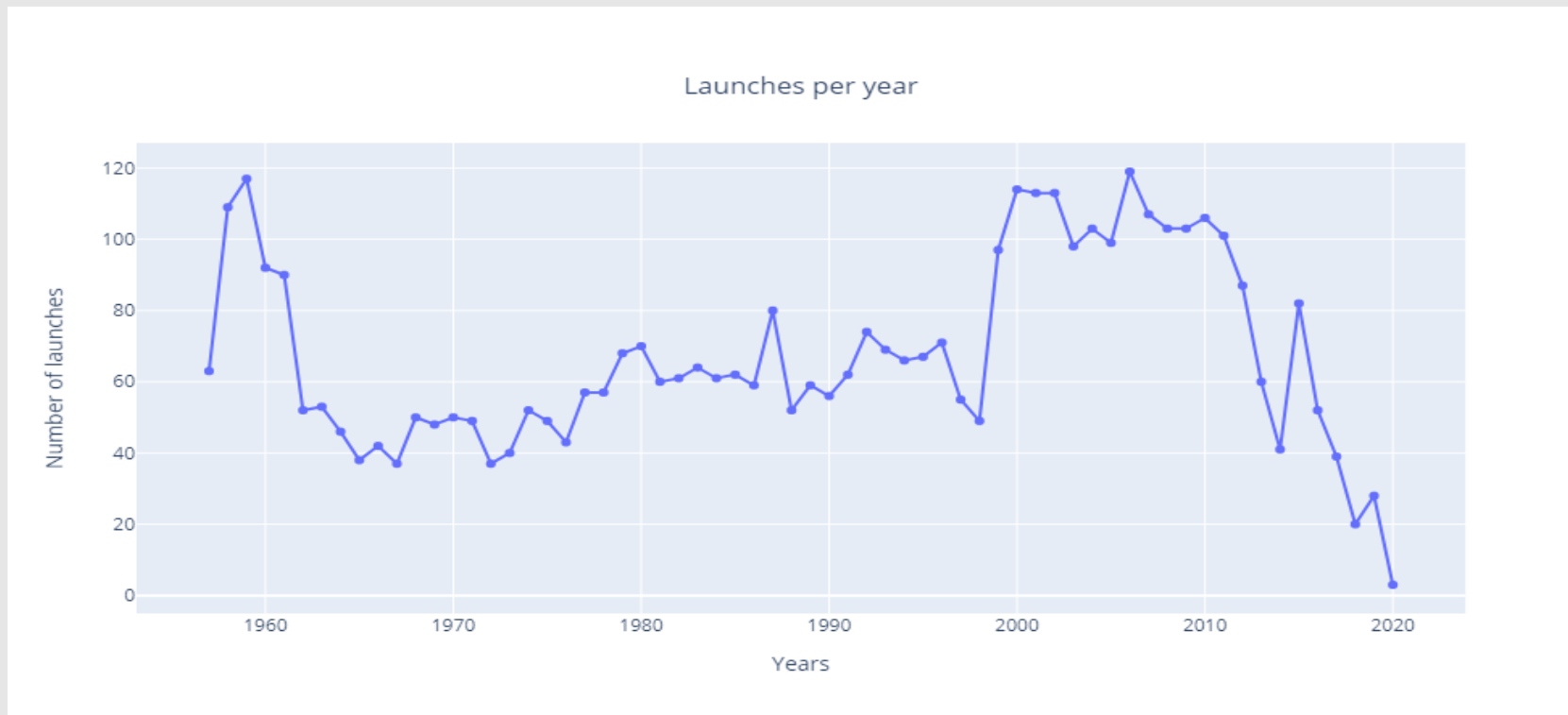
AMERICA 173 (12.27%)

ASIA 63 (12.63%)

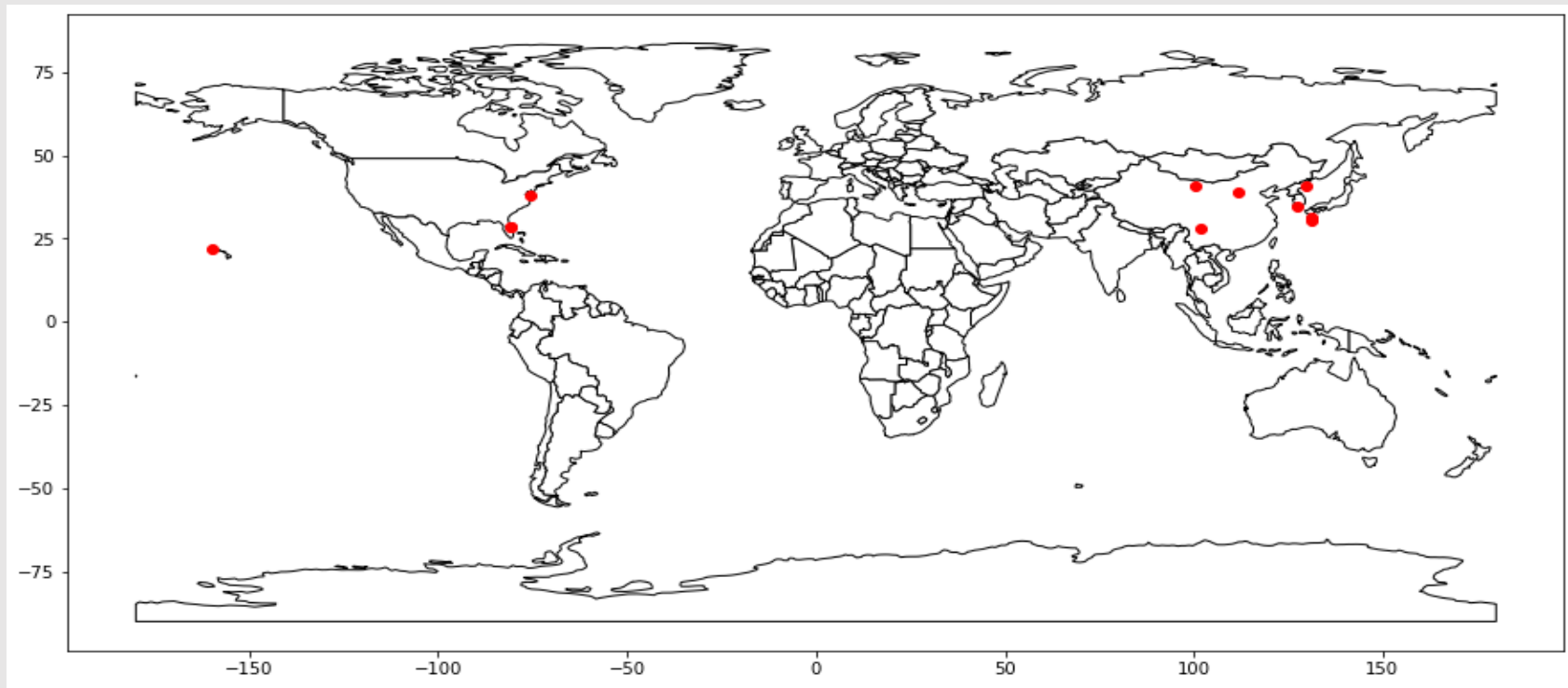
EUROPE 26 (7.58%)

RUSSIA 183 (8.83%)

Analisi in funzione degli anni



Analisi geografiche sui lanci



Per concludere

Risultati:

- Analisi rispettano le previsioni
- Diversi grafici parzialmente corretti per via di informazioni riservate
- Scoperta di informazioni interessanti
- Utilizzo di nuove librerie per superare nuovi problemi (geopy, geopandas, matplotlib)

Obiettivi

- Miglioramento della mappa
- Analisi sulle informazioni non ancora studiate
- Analisi dei soli lanci falliti