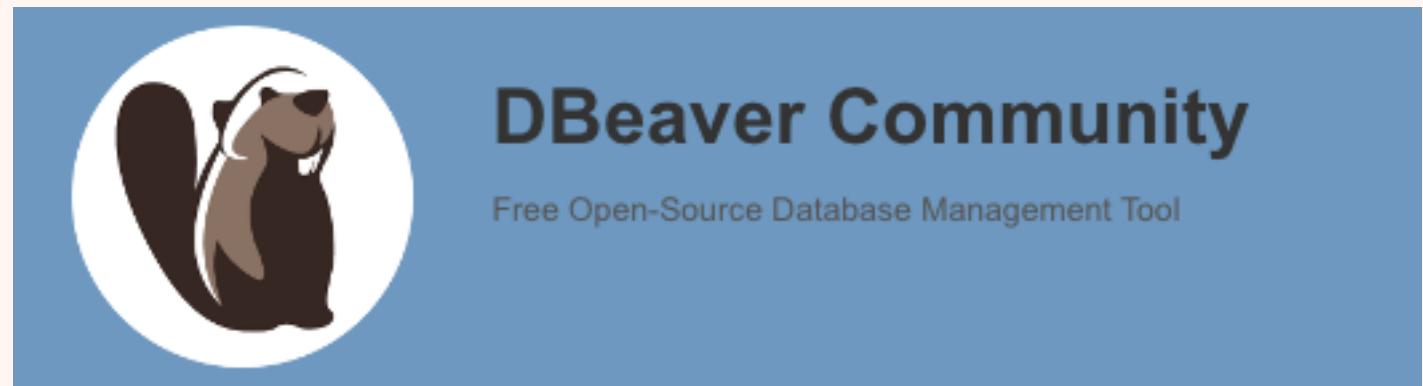

Semester Project

FEC CAMPAIGN FINANCE DATA ANALYSIS

Chase Cabrera & Frank Su

FALL CS577 SDSU

DATABASE ACCESS



- **MySQL**
- **Username: cs577**
- **Password: cs577**
- **Server: cs577.ccyegfmfe9mv.us-east-1.rds.amazonaws.com**
- **Port: 3306**



HIGH-LEVEL OVERVIEW

Objectives

Dataset

Data Pipeline

EDA

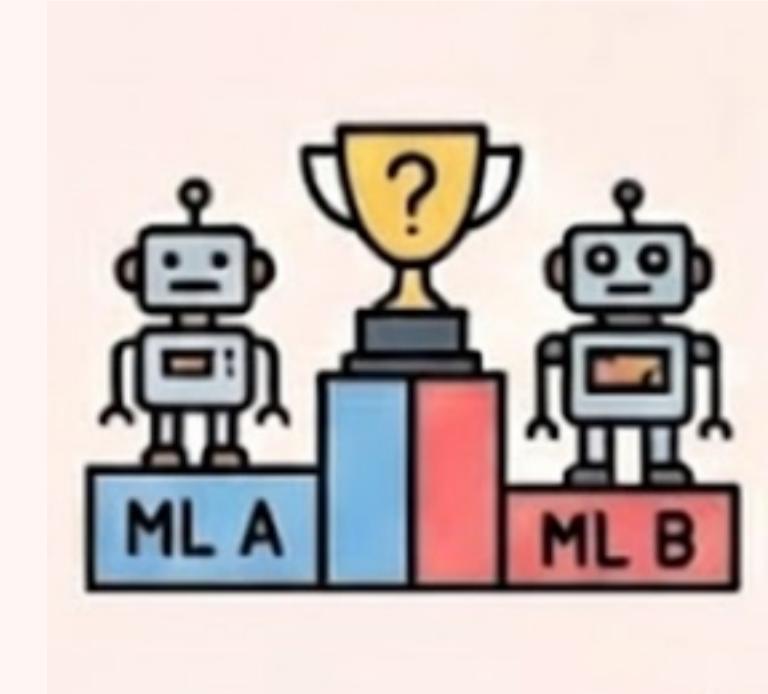
Models

Top 5 Independent Features

Bonus Findings

PRIMARY OBJECTIVES

- **Can we predict Political Party affiliation?**
- **Can we predict a Contributor's donation amounts?**
- **Which Data Science / Machine Learning (ML) approach performs better?**



DATASET

- **11,349,252 unique contributors**
- **111+ million contributions**
- **Time spanned 1980 - 2025 (40+ years)**
- **Geography: All 50 US States & territories**
- **Publicly available via <https://www.fec.gov/data/browse-data/>**

FEDERAL ELECTION COMMISSION DATA FORMAT

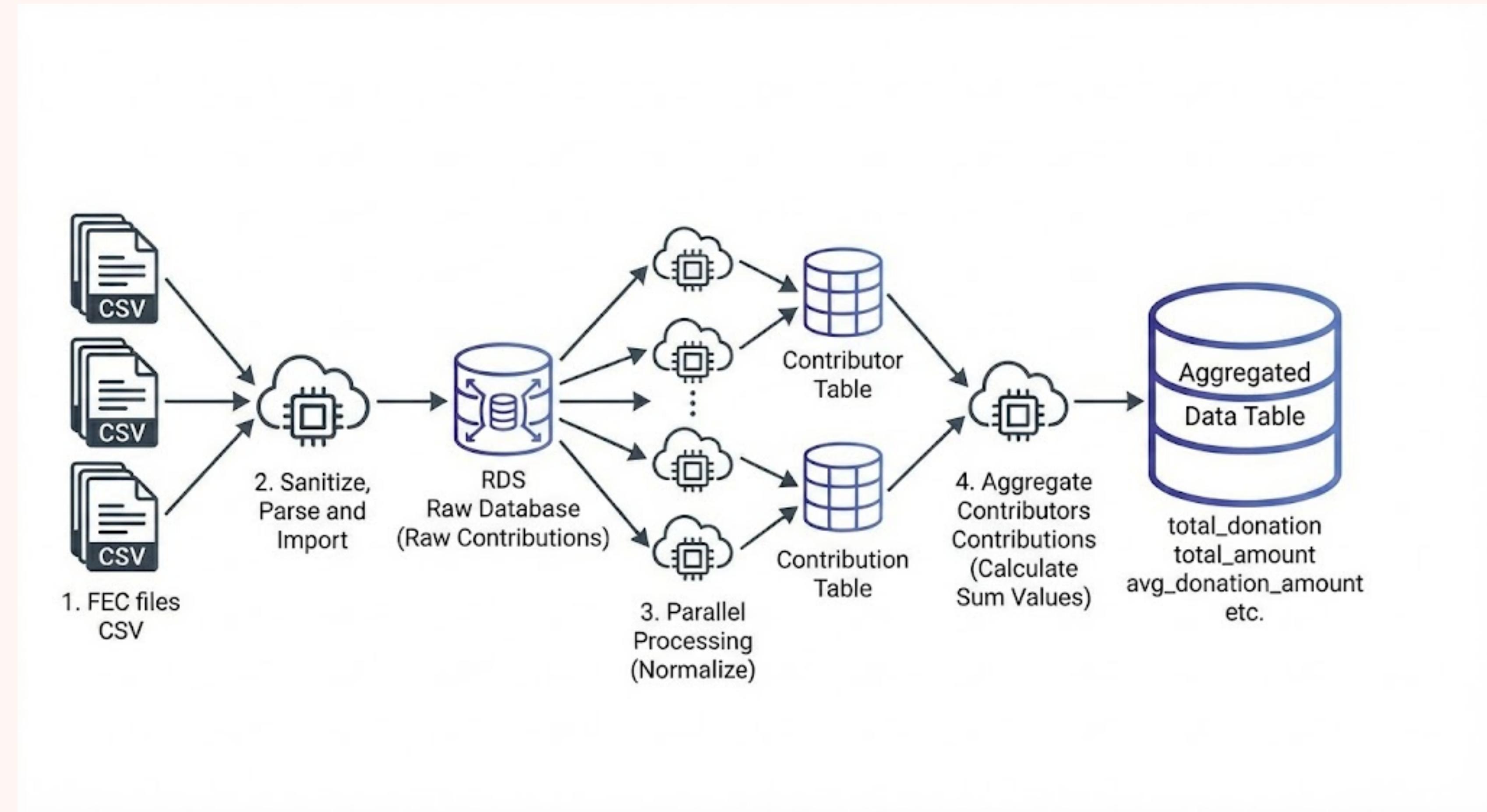
C00053553|N|125|P|202503209754260021|15|IND|SCHMIDT, BERNHARD E.|REDON,TX|360309315|SELF-EMPLOYED|PARTNER|03112025|250||SA11A.286117|1881667|||4032020251180438434
C00053553|N|125|P|202503209754260021|15|IND|STADLER, ELIZABETH B.|NASHVILLE|TN|372052916|RETIRED|RETIRED|03112025|250||SA11A.285937|1881667|||4032020251180438435
C00053553|N|125|P|202503209754260022|15|IND|TRUE, WILLIAM|SACRAMENTO|CA|958643045|RETIRED|RETIRED|03112025|500||SA11A.286121|1881667|||4032020251180438436
C00053553|N|125|P|202503209754260022|15|IND|UREN, THOMAS J.|FAIRFAX|MN|553320411|RETIRED|RETIRED|03112025|250||SA11A.285930|1881667|||4032020251180438437
C00053553|N|125|P|202503209754260022|15|IND|SENDER, DONALD A.|WHEATON|IL|601874644|RETIRED|RETIRED|03122025|250||SA11A.286381|1881667|||4032020251180438438
C00850164|T|TER|P2024|202501229747705966|15C|CAN|BRESLIN, KAREN|ELIZABETH|CO|80107|||01032025|225|H4C004173|CDR-000000003207953|1864869|||4012720251135293119
C00850164|T|TER|P2024|202501229747705966|15C|CAN|BRESLIN, KAREN|ELIZABETH|CO|80107|||01072025|247|H4C004173|CDR-000000003207956|1864869|||4012720251135293120
C00850164|T|TER|P2024|202501229747705966|15C|CAN|BRESLIN, KAREN|ELIZABETH|CO|80107|||01072025|6500|H4C004173|CDR-000000003207740|1864869|||4012720251135293121
C00857359|N|Q1|P2026|202504159755807914|15E|IND|CATHCART, CLIFTON H|LUFKIN|TX|75901|SELF-EMPLOYED|PHYSICIAN|01042025|99|C00694323|SA11AI.147988115|1887687|||4042820251187146219
C00857359|N|Q1|P2026|202504159755807914|15E|IND|GREENE, DAVID|HARRAH|OK|73045|SELF-EMPLOYED|FILM MAKER|01062025|52|C00694323|SA11AI.147988027|1887687|||4042820251187146220
C00857359|N|Q1|P2026|202504159755807915|15E|IND|SMITH, ROBERT|SPRING BRANCH|TX|78070|RETIRED|RETIRED|01082025|100|C00694323|SA11AI.148029387|1887687|||4042820251187146222
C00857359|N|Q1|P2026|202504159755807916|15E|IND|MELLO, NANCY|DALLAS|TX|75230|RETIRED|RETIRED|01092025|1033|C00694323|SA11AI.148181614|1887687|||4042820251187146225
C00857359|N|Q1|P2026|202504159755807918|15F|IND|WANG, PATRICK|FLORAL PARK|NY|11001|SELF-EMPLOYED|LEGAL PROFESSIONAL|01022025|50|C00694323|SA11AI.148461035|1887687|||4042820251187146226
C00857359|N|Q1|P2026|202504159755807941|15E|IND|MUSK, ELON|AUSTIN|TX|78734|SPACEX|CEO|03192025|6600|C00694323|SA11AI.153405087|1887687|||4042820251187146301
C00857359|N|Q1|P2026|202504159755807942|15|IND|MUSK, ELON|AUSTIN|TX|78734|SPACEX|CEO|03192025|-3100||SA11AI.153405087.1|1887687|X||4042820251187146302
C00857359|N|Q1|P2026|202504159755807935|15E|IND|CATHCART, CLIFTON H|LUFKIN|TX|75901|SELF-EMPLOYED|PHYSICIAN|03042025|99|C00694323|SA11AI.152962790|1887687|||4042820251187146283
C00857359|N|Q1|P2026|202504159755807936|15E|IND|GREENE, DAVID|HARRAH|OK|73045|SELF-EMPLOYED|FILM MAKER|03062025|52|C00694323|SA11AI.15300987|1887687|||4042820251187146285
C00857359|N|Q1|P2026|202504159755807937|15E|IND|BARNETT, MARCIA|CARROLLTON|TX|75007|RETIRED|RETIRED|03072025|25|C00694323|SA11AI.153107188|1887687|||4042820251187146288
C00857359|N|Q1|P2026|202504159755807937|15E|IND|KNYTYCH, MICHAEL|SOUTH HAVEN|MI|49090|KMC ENTERPRISES|RESTAURANT|03102025|520|C00694323|SA11AI.153107199|1887687|||4042820251187146289
C00857359|N|Q1|P2026|202504159755807938|15E|IND|SMITH, ROBERT|SPRING BRANCH|TX|78070|RETIRED|RETIRED|03082025|100|C00694323|SA11AI.153107217|1887687|||4042820251187146290
C00857359|N|Q1|P2026|202504159755807938|15E|IND|BROWN, KATIE|WASHINGTON|DC|20001|ARNOLD PORTER|POLICY ADVISOR|03112025|516|C00694323|SA11AI.153150513|1887687|||4042820251187146292
C00857359|N|Q1|P2026|202504159755807940|15E|IND|RYDIN, MICHAEL T|HOUSTON|TX|77081|RETIRED|RETIRED|03112025|3500|C00552851|SA11AI.153311318|1887687|||4042820251187146297
C00857359|N|Q1|P2026|202504159755807920|15E|IND|KENCK, CLANCY|MISSOULA|MT|59801|RETIRED|RETIRED|01252025|104|C00694323|SA11AI.150302348|1887687|||4042820251187146236
C00857359|N|Q1|P2026|202504159755807920|15E|IND|MAYS, CHRIS|AUBREY|TX|76227|SELF-EMPLOYED|REAL ESTATE|01272025|50|C00694323|SA11AI.150302354|1887687|||4042820251187146237
C00857359|N|Q1|P2026|202504159755807920|15E|IND|MILLER, EDWARD|BOERNE|TX|78006|FORESIGHT GOLF LLC|SELF-EMPLOYED|01232025|104|C00694323|SA11AI.150302359|1887687|||4042820251187146238
C00857359|N|Q1|P2026|202504159755807921|15E|IND|SMITH, ROBERT|SPRING BRANCH|TX|78070|RETIRED|RETIRED|01272025|100|C00694323|SA11AI.150302376|1887687|||4042820251187146239
C00857359|N|Q1|P2026|202504159755807921|15E|IND|HAN, ERIC|CORINTH|TX|76210|HAN ANESTHESIOLOGY|DENTAL ANESTHESIOLOGIST|01282025|52|C00694323|SA11AI.150339442|1887687|||4042820251187146241
C00857359|N|Q1|P2026|202504159755807923|15E|IND|CATHCART, CLIFTON H|LUFKIN|TX|75901|SELF-EMPLOYED|PHYSICIAN|02042025|99|C00694323|SA11AI.150577831|1887687|||4042820251187146246
C00857359|N|Q1|P2026|202504159755807923|15E|IND|MARTINEZ, ISRAEL|ROANOKE|TX|76262|AXON|CEO|02052025|1033|C00694323|SA11AI.150577845|1887687|||4042820251187146247
C00857359|N|Q1|P2026|202504159755807945|15E|IND|DUBOIS, TRA|LELAND|MS|38756|WORLD CLASS ATHLETICSURFACES|MFG|03242025|104|C00694323|SA11AI.153583108|1887687|||4042820251187146312
C00857359|N|Q1|P2026|202504159755807945|15E|IND|KENCK, CLANCY|MISSOULA|MT|59801|RETIRED|RETIRED|03252025|104|C00694323|SA11AI.153583078|1887687|||4042820251187146313
C00857359|N|Q1|P2026|202504159755807946|15E|IND|LEMUNION, GLENN|MC LEAN|VA|22101|THE LEMUNION GROUP LLC|CONSULTANT|03272025|500|C00694323|SA11AI.153654534|1887687|||4042820251187146316
C00857359|N|Q1|P2026|202504159755807947|15E|IND|MAYS, CHRIS|AUBREY|TX|76227|SELF-EMPLOYED|REAL ESTATE|03272025|50|C00694323|SA11AI.153654536|1887687|||4042820251187146317
C00857359|N|Q1|P2026|202504159755807947|15E|IND|SMITH, ROBERT|SPRING BRANCH|TX|78070|RETIRED|RETIRED|03272025|100|C00694323|SA11AI.153654542|1887687|||4042820251187146318
C00857359|N|Q1|P2026|202504159755807948|15E|IND|HAN, ERIC|CORINTH|TX|76210|HAN ANESTHESIOLOGY|DENTAL ANESTHESIOLOGIST|03282025|52|C00694323|SA11AI.153703920|1887687|||4042820251187146320
C00857359|N|Q1|P2026|202504159755807924|15E|IND|GREENE, DAVID|HARRAH|OK|73045|SELF-EMPLOYED|FILM MAKER|02062025|52|C00694323|SA11AI.150610207|1887687|||4042820251187146249
C00857359|N|Q1|P2026|202504159755807925|15E|IND|BARNETT, MARCIA|CARROLLTON|TX|75007|RETIRED|RETIRED|02102025|49|C00694323|SA11AI.150728987|1887687|||4042820251187146252
C00857359|N|Q1|P2026|202504159755807950|15E|IND|WINKLEVOSS, TYLER|NEW YORK|NY|10010|WINKLEVOSS CAPITAL MANAGEMENT|FOUNDER|03312025|6900|C00694323|SA11AI.153783874|1887687|||4042820251187146326
C00857359|N|Q1|P2026|202504159755807950|15|IND|WINKLEVOSS, TYLER|NEW YORK|NY|10010|WINKLEVOSS CAPITAL MANAGEMENT|FOUNDER|03312025|-3400||SA11AI.153783874.1|1887687|X||4042820251187146327
C00857359|N|Q1|G2026|202504159755807950|15|IND|WINKLEVOSS, TYLER|NEW YORK|NY|10010|WINKLEVOSS CAPITAL MANAGEMENT|FOUNDER|03312025|3400||SA11AI.153783874.2|1887687|X||4042820251187146328
C00857359|N|Q1|P2026|202504159755807951|15|IND|CHIANG, LAURENCE|ALLEN|TX|75013|MAG OPUS INC|REAL ESTATE|03142025|500||SA11AI.153188448|1887687|||4042820251187146330
C00857359|N|Q1|P2026|202504159755807951|15|IND|DING, TINGYUI|ALLEN|TX|75013|||03142025|1000||SA11AI.153188449|1887687|||4042820251187146331
C00857359|N|Q1|P2026|202504159755807952|15|IND|GIBSON, JOSEPH|WASHINGTON|DC|20016|THE GIBSON GROUP, LLC|SELF-EMPLOYED|03312025|500||SA11AI.153865813|1887687|||4042820251187146332
C00857359|N|Q1|P2026|202504159755807948|15|IND|BENNITT, MATT|NEW YORK|NY|10111|CHRISTIAN UNION|MINISTER|03312025|500|C00694323|SA11AI.153783827|1887687|||4042820251187146322
C00857359|N|Q1|P2026|202504159755807949|15|IND|WINKLEVOSS, CAMERON|NEW YORK|NY|10010|WINKLEVOSS CAPITAL MANAGEMENT|FOUNDER|03312025|6900|C00694323|SA11AI.153783873|1887687|||4042820251187146323
C00857359|N|Q1|P2026|202504159755807949|15|IND|WINKLEVOSS, CAMERON|NEW YORK|NY|10010|WINKLEVOSS CAPITAL MANAGEMENT|FOUNDER|03312025|-3400||SA11AI.153783873.1|1887687|X||4042820251187146324
C00857359|N|Q1|G2026|202504159755807949|15|IND|WINKLEVOSS, CAMERON|NEW YORK|NY|10010|WINKLEVOSS CAPITAL MANAGEMENT|FOUNDER|03312025|3400||SA11AI.153783873.2|1887687|X||4042820251187146325
C00857359|N|Q1|P2026|202504159755807927|15|IND|KRUPP, RICHARD|NEW YORK|NY|10075|PIERPOINT|MANAGING PARTNER|02142025|1000|C00694323|SA11AI.150917332|1887687|||4042820251187146258
C00857359|N|Q1|P2026|202504159755807928|15|IND|RANGASWAMY, SATHYA|FRISCO|TX|75034|ZEMEGA INC|CEO|02182025|1033|C00694323|SA11AI.150984040|1887687|||4042820251187146260

111+ MILLION RECORDS / 100+ GB

- **Unable to fit in a Data frame**
 - **Requires normalization**
 - **Requires aggregation**
 - **These processes take a long time so we implemented parallelization**
-

DATA PIPELINE ARCHITECTURE

DATA PIPELINE ARCHITECTURE



Database Tables

contributors	
123 id	bigint
AZ donor_key	varchar(255)
AZ first_name	varchar(100)
AZ last_name	varchar(100)
AZ middle_name	varchar(100)
AZ name_suffix	varchar(20)
AZ city	varchar(30)
AZ state	varchar(2)
AZ zip_code	varchar(9)
AZ employer	varchar(38)
AZ occupation	varchar(38)
123 total_donations	int
123 total_amount	decimal(14,2)
123 donations_last_2years	int
123 amount_last_2years	decimal(14,2)
123 recency_days	int
123 avg_donation_amount	decimal(14,2)
123 first_donation_date	date
123 last_donation_date	date
123 unique_committees	int
123 dem_donations	int
123 dem_amount	decimal(14,2)
123 rep_donations	int
123 rep_amount	decimal(14,2)
123 lib_donations	int
123 lib_amount	decimal(14,2)
123 gre_donations	int
123 gre_amount	decimal(14,2)
123 ind_donations	int
123 ind_amount	decimal(14,2)
123 other_donations	int
123 other_amount	decimal(14,2)
123 dem_pct	decimal(5,2)
123 rep_pct	decimal(5,2)
AZ primary_party	varchar(10)
123 created_at	timestamp
123 updated_at	timestamp

raw_contributions	
123 id	bigint
AZ cmte_id	varchar(9)
AZ amndt_ind	varchar(1)
AZ rpt_tp	varchar(3)
AZ transaction_pgi	varchar(5)
AZ image_num	varchar(18)
AZ transaction_tp	varchar(3)
AZ entity_tp	varchar(3)
AZ name	varchar(200)
AZ city	varchar(30)
AZ state	varchar(2)
AZ zip_code	varchar(9)
AZ employer	varchar(38)
AZ occupation	varchar(38)
123 transaction_dt	date
123 transaction_amt	decimal(14,2)
AZ amndt_ind	varchar(1)
AZ rpt_tp	varchar(3)
AZ image_num	varchar(18)
AZ entity_tp	varchar(3)
AZ other_id	varchar(9)
AZ tran_id	varchar(32)
123 file_num	int
AZ memo_cd	varchar(1)
AZ memo_text	varchar(100)
123 sub_id	bigint
AZ first_name	varchar(100)
AZ last_name	varchar(100)
AZ middle_name	varchar(100)
AZ name_suffix	varchar(20)
AZ source_file	varchar(255)
123 status	tinyint
AZ error_message	text
123 created_at	timestamp
123 processed_at	timestamp

committees	
AZ cmte_id	varchar(9)
AZ cmte_nm	varchar(200)
AZ tres_nm	varchar(90)
AZ cmte_st1	varchar(34)
AZ cmte_st2	varchar(34)
AZ cmte_city	varchar(30)
AZ cmte_st	varchar(2)
AZ cmte_zip	varchar(9)
AZ cmte_dsgn	varchar(1)
AZ cmte_tp	varchar(1)
AZ cmte_pty_affiliation	varchar(3)
AZ cmte_filing_freq	varchar(1)
AZ org_tp	varchar(1)
AZ connected_org_nm	varchar(200)
AZ cand_id	varchar(9)
123 created_at	timestamp
123 updated_at	timestamp

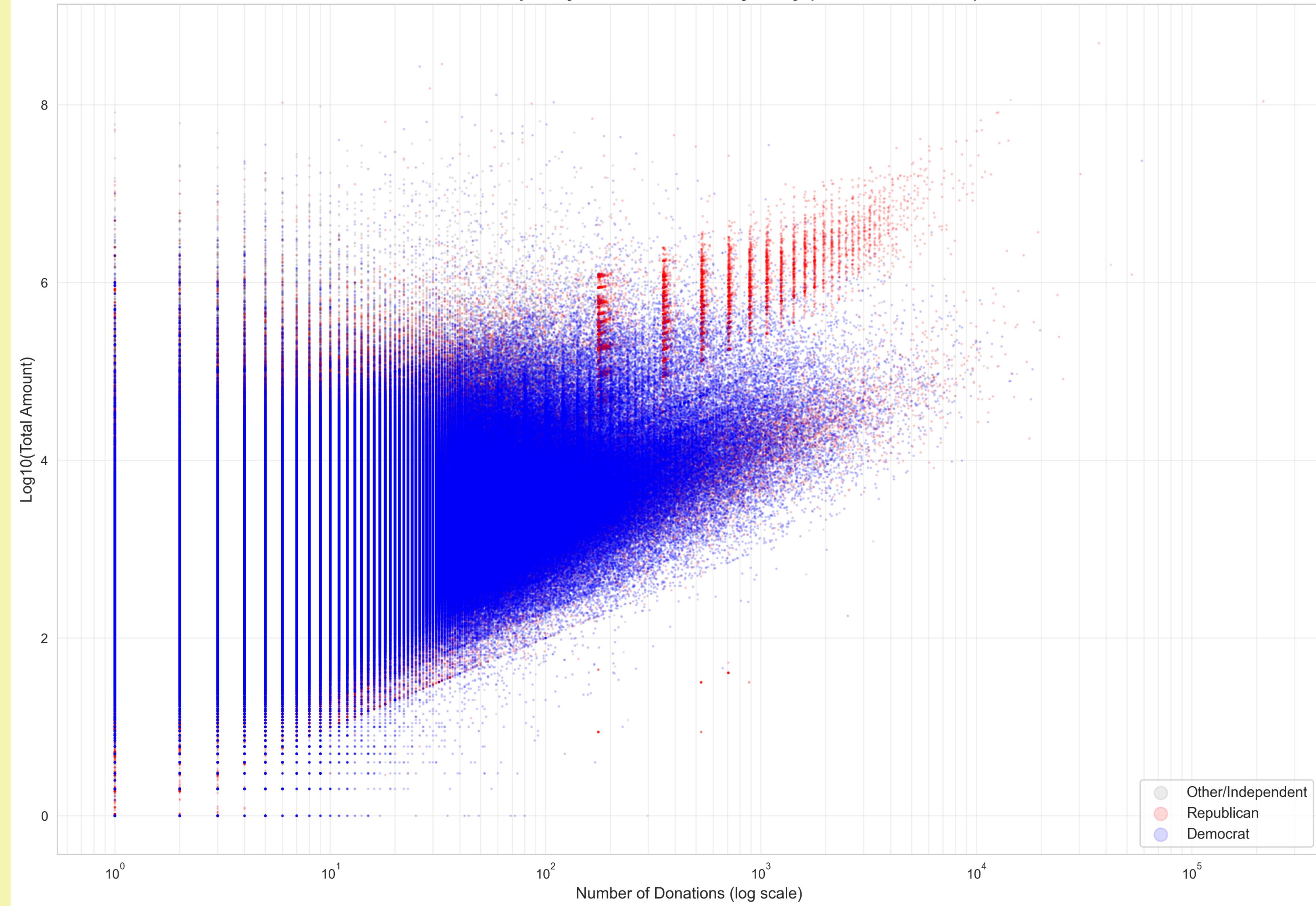
candidates	
AZ cand_id	varchar(9)
AZ cand_name	varchar(200)
AZ cand_pty_affiliation	varchar(3)
123 cand_election_yr	int
AZ cand_office_st	varchar(2)
AZ cand_office	varchar(1)
AZ cand_office_district	varchar(2)
AZ cand_jci	varchar(1)
AZ cand_status	varchar(1)
AZ cand_pcc	varchar(9)
AZ cand_st1	varchar(34)
AZ cand_st2	varchar(34)
AZ cand_city	varchar(30)
AZ cand_st	varchar(2)
AZ cand_zip	varchar(9)
123 created_at	timestamp
123 updated_at	timestamp

Ctrl+click to open SQL console	Copy	A-Z first_name	A-Z last_name	A-Z middle_name	A-Z name_suffix	A-Z city	A-Z state	A-Z zip_code	A-Z employer	A-Z occupation	123 total_donations					
7,387,274	MUSK ELON 752142619 DALLAS	ELON	MUSK	[NULL]	[NULL]	DALLAS	TX	752142619	SPACE EXPLORATION TECHNOLOGIES CORP.	CEO	1					
7,387,275	MUSK ELON 78734 AUSTIN	ELON	MUSK	[NULL]	[NULL]	AUSTIN	TX	78734	[NULL]	[NULL]	56					
7,387,276	MUSK ELON 78734 LAKEWAY	ELON	MUSK	[NULL]	[NULL]	LAKEWAY	TX	78734	[NULL]	[NULL]	2					
7,387,277	MUSK ELON 787340032 AUSTIN	ELON	MUSK	[NULL]	[NULL]	AUSTIN	TX	787340032	SELF EMPLOYED	INVESTOR	8					
7,387,278	MUSK ELON 787340277 AUSTIN	ELON	MUSK	[NULL]	[NULL]	AUSTIN	TX	787340277	SPACE EXPLORATION TECHNOLOGIES CORP.	CEO	33					
7,387,279	MUSK ELON 787340277 LAKEWAY	ELON	MUSK	[NULL]	[NULL]	LAKEWAY	TX	787340277	SPACEX	CEO	20					
7,387,280	MUSK ELON 90049 LOS ANGELES	ELON	MUSK	[NULL]	[NULL]	LOS ANGELES	CA	90049	SPACEX	FOUNDER	3					
7,387,281	MUSK ELON 900490258 LOS ANGELES	ELON	MUSK	[NULL]	[NULL]	LOS ANGELES	CA	900490258	SPACEX	TECHNOLOGIST	1					
7,387,282	MUSK ELON 90250 HAWTHORNE	ELON	MUSK	[NULL]	[NULL]	HAWTHORNE	CA	90250	[NULL]	[NULL]	13					
7,387,283	MUSK ELON 902506844 HAWTHORNE	ELON	MUSK	[NULL]	[NULL]	HAWTHORNE	CA	902506844	SPACE X	ROCKET MANUFACTURER	14					
7,387,284	MUSK ELON 92253 LA QUINTA	ELON	MUSK	[NULL]	[NULL]	LA QUINTA	CA	92253	SPACEX	CHAIRMAN/CEO	2					
7,387,285	MUSK ELON 94303 PALO ALTO	ELON	MUSK	[NULL]	[NULL]	PALO ALTO	CA	94303	SPACEX	CHIEF EXECUTIVE OFFICER	2					
7,387,286	MUSK ELON 943030995 PALO ALTO	ELON	MUSK	[NULL]	[NULL]	PALO ALTO	CA	943030995	TESLA	CEO	3					
7,387,287	MUSK ELON 94304 PALO ALTO	ELON	MUSK	[NULL]	[NULL]	PALO ALTO	CA	94304	TESLA	CHAIRMAN	1					

123 total_amount	123 donations_last_2years	123 amount_last_2years	123 recency_days	123 avg_donation_amount	⌚ first_donation_date	⌚ last_donation_date	123 unique_committees	123 dem_donations	123 dem_amount	
results as spreadsheet	00	1	3,000,000	405	3,000,000	2024-10-22	2024-10-22	1	0	0
20,461,600	56	20,461,600	157	365,385.71	2024-07-24	2025-06-27	24	2	15,000,000	
944,600	2	944,600	335	472,300	2024-10-21	2024-12-31	1	0	0	
3,352,800	8	3,352,800	252	419,100	2024-08-23	2025-03-24	4	0	0	
288,844,836	33	288,844,836	154	8,752,873.82	2024-07-03	2025-06-30	2	1	5,000,000	
118,000	20	118,000	251	5,900	2025-03-19	2025-03-25	3	0	0	
41,400	0	0	2,736	13,800	2018-03-06	2018-06-05	2	1	2,500	
2,500	0	0	2,827	2,500	2018-03-06	2018-03-06	1	0	0	
111,100	0	0	2,975	8,546.15	2013-03-08	2017-10-09	8	5	15,800	
900,800	1	825,000	426	64,342.86	2013-06-04	2024-10-01	7	4	10,800	
4,000	0	0	4,170	2,000	2014-07-02	2014-07-02	1	0	0	
12,700	0	0	3,798	6,350	2014-06-04	2015-07-09	2	1	2,700	
72,800	0	0	2,600	24,266.67	2015-12-15	2018-10-19	2	3	72,800	
5,000	0	0	4,008	5,000	2014-12-11	2014-12-11	1	0	0	

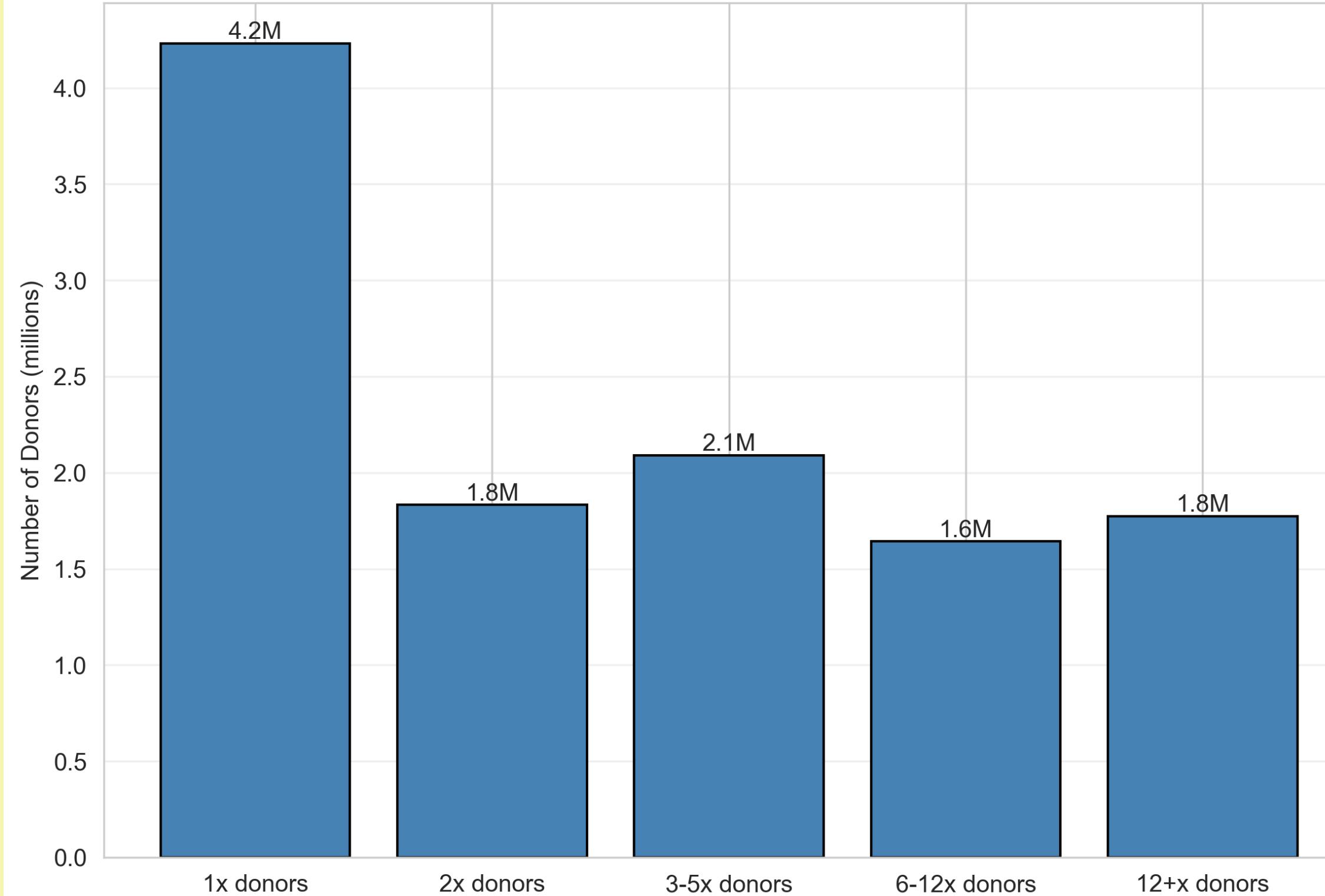
EXPLORATORY DATA ANALYSIS (EDA)

Donation Frequency vs Total Amount by Party (11,568,309 donors)

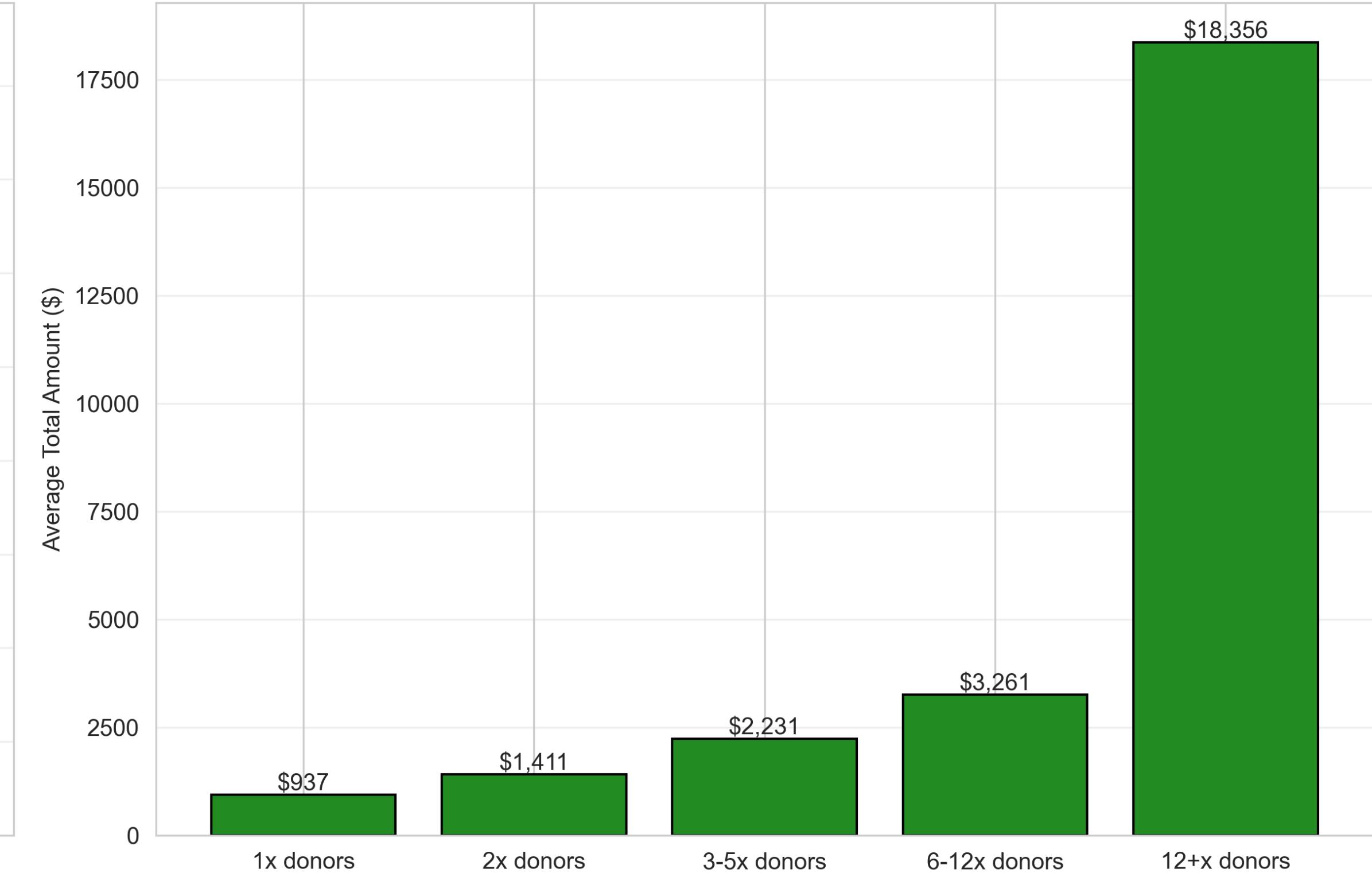


Donor Frequency Analysis

Number of Donors by Donation Frequency

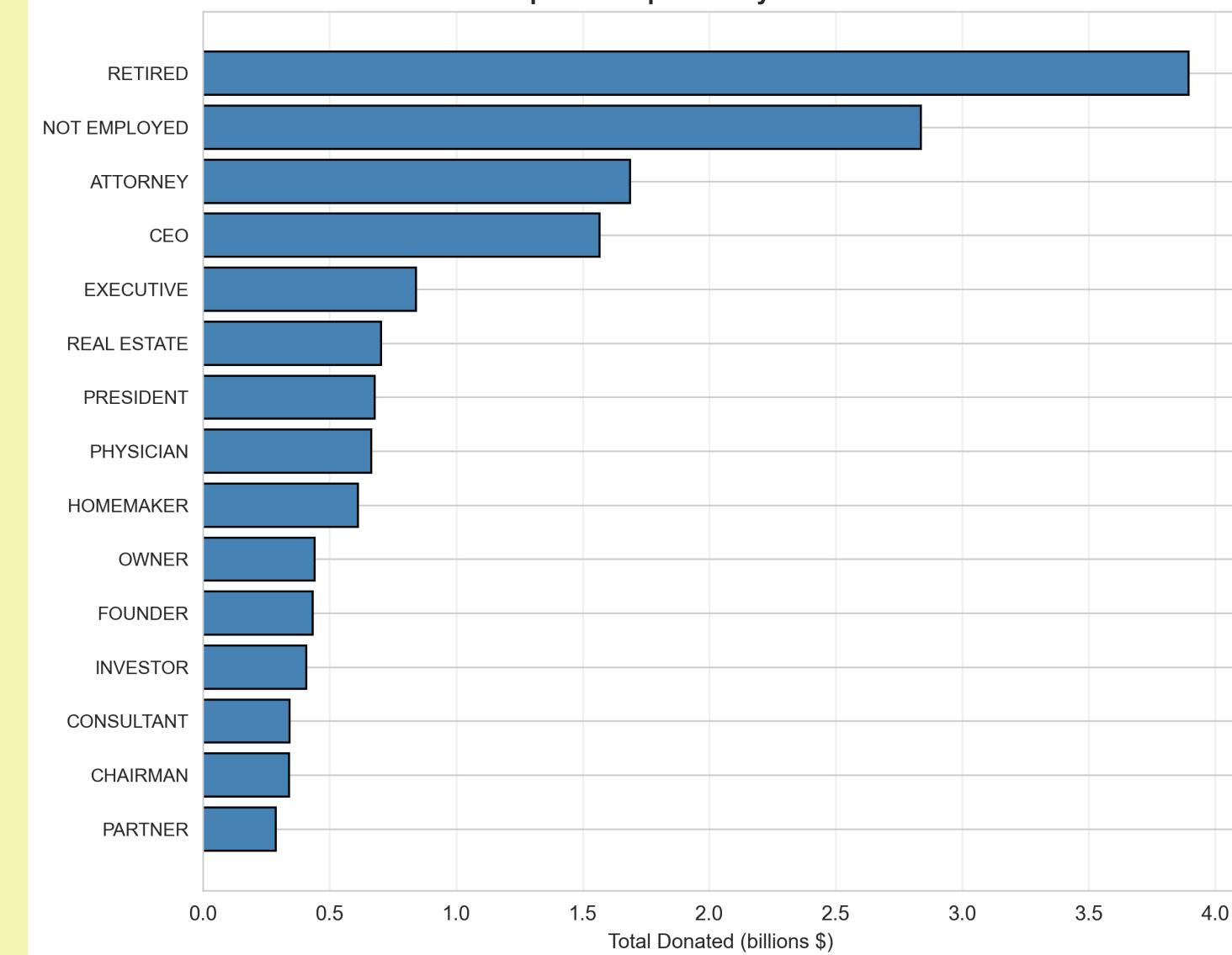


Average Total Amount by Donation Frequency

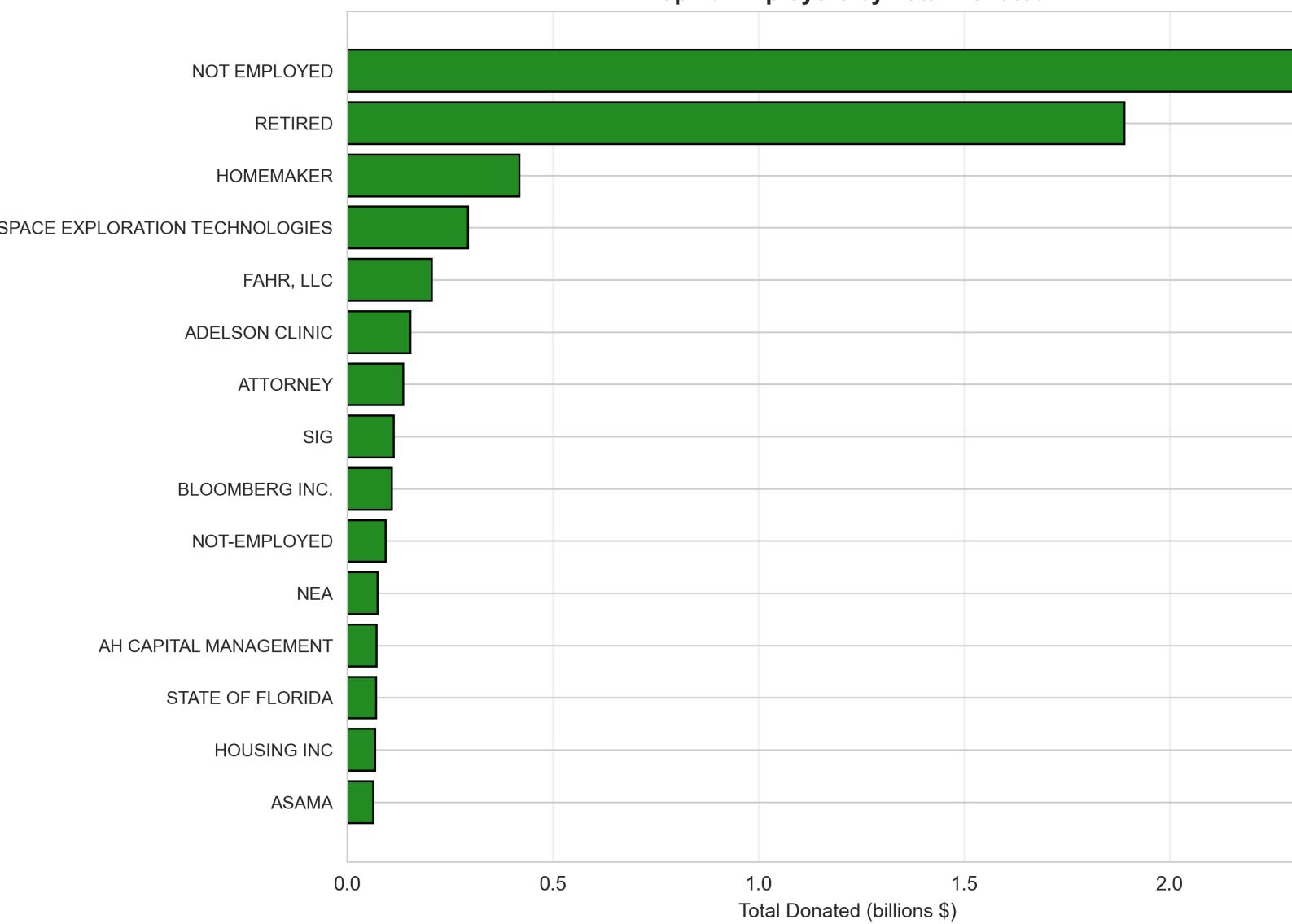


Occupation & Employer Analysis

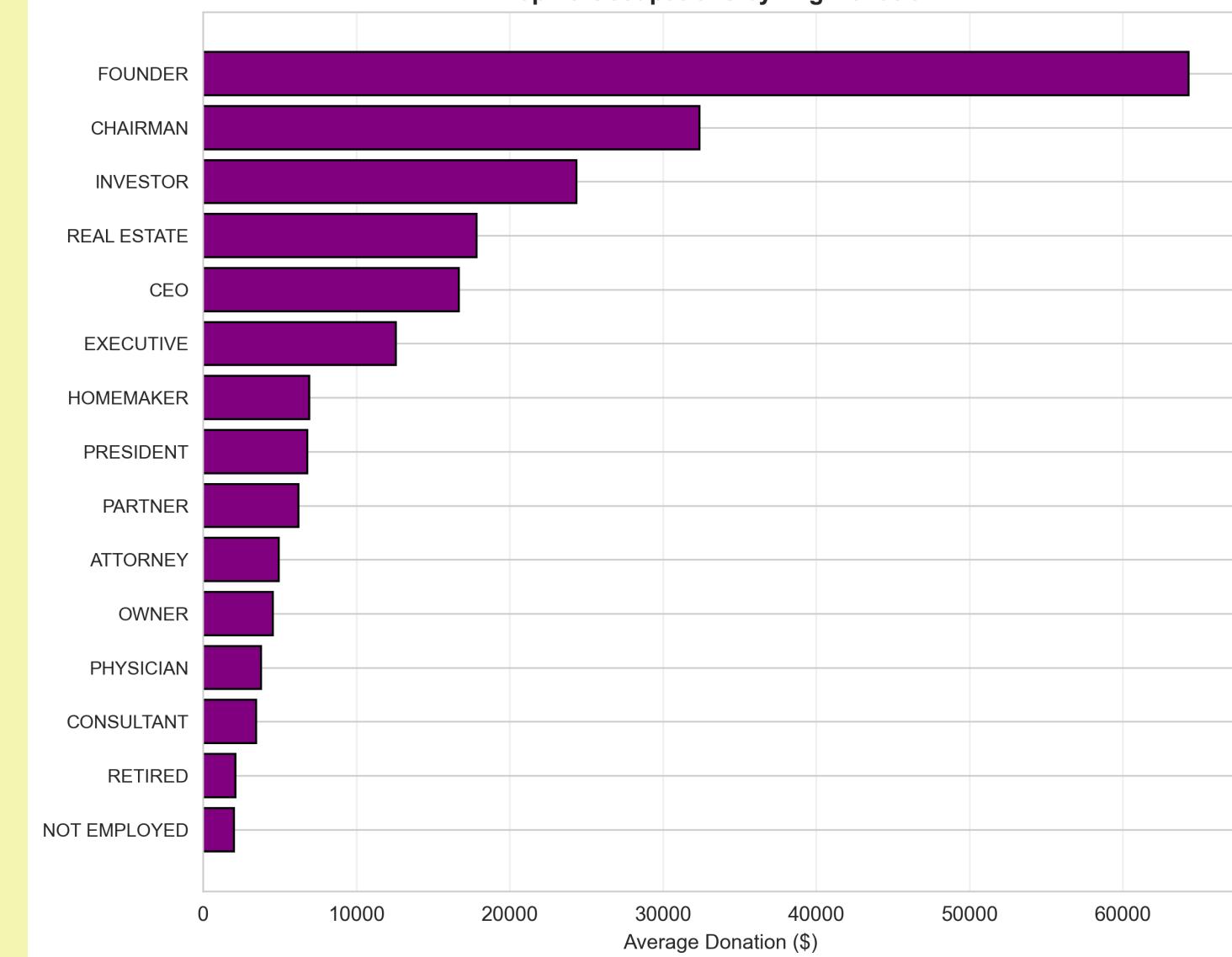
Top 15 Occupations by Total Donated



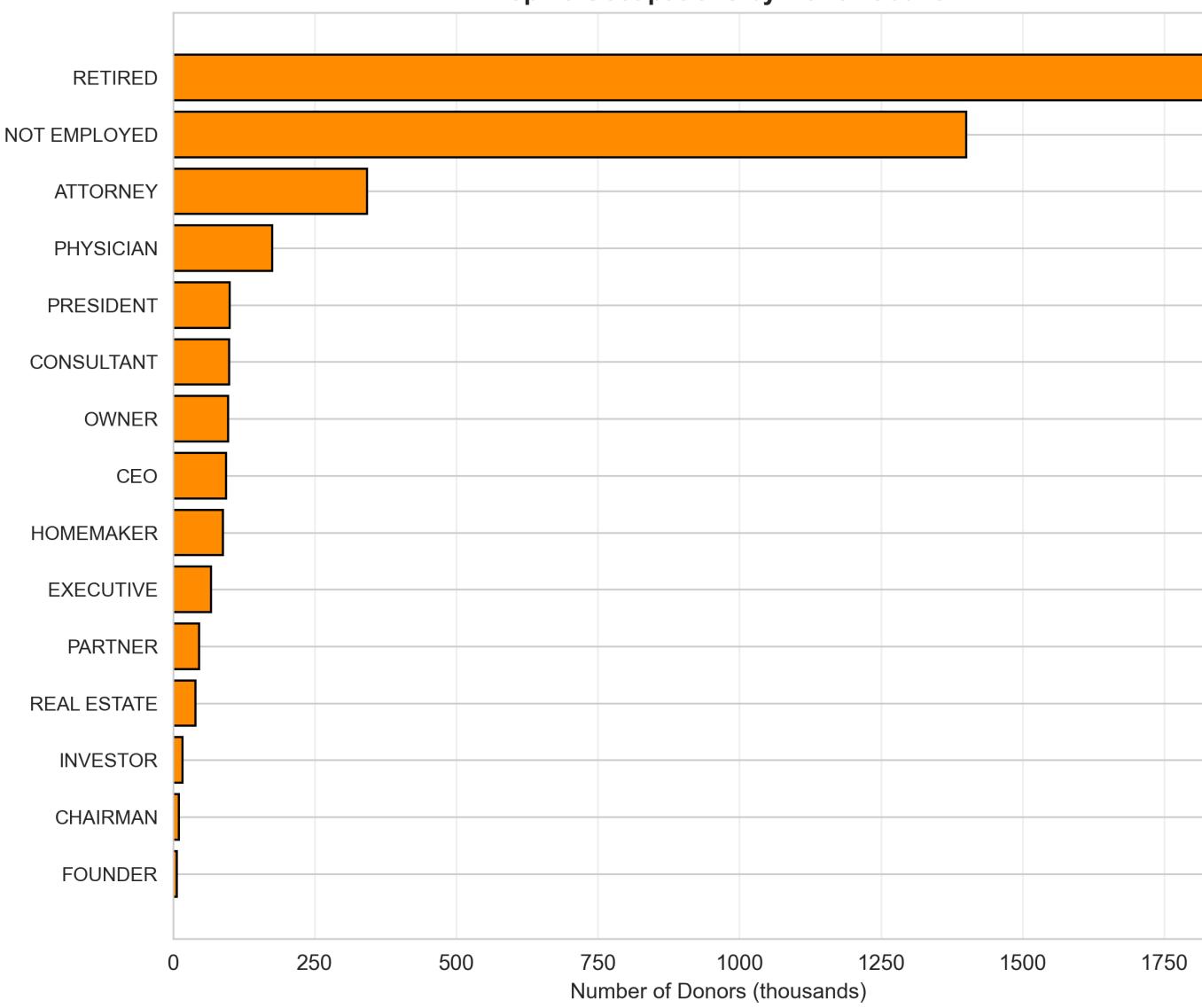
Top 15 Employers by Total Donated

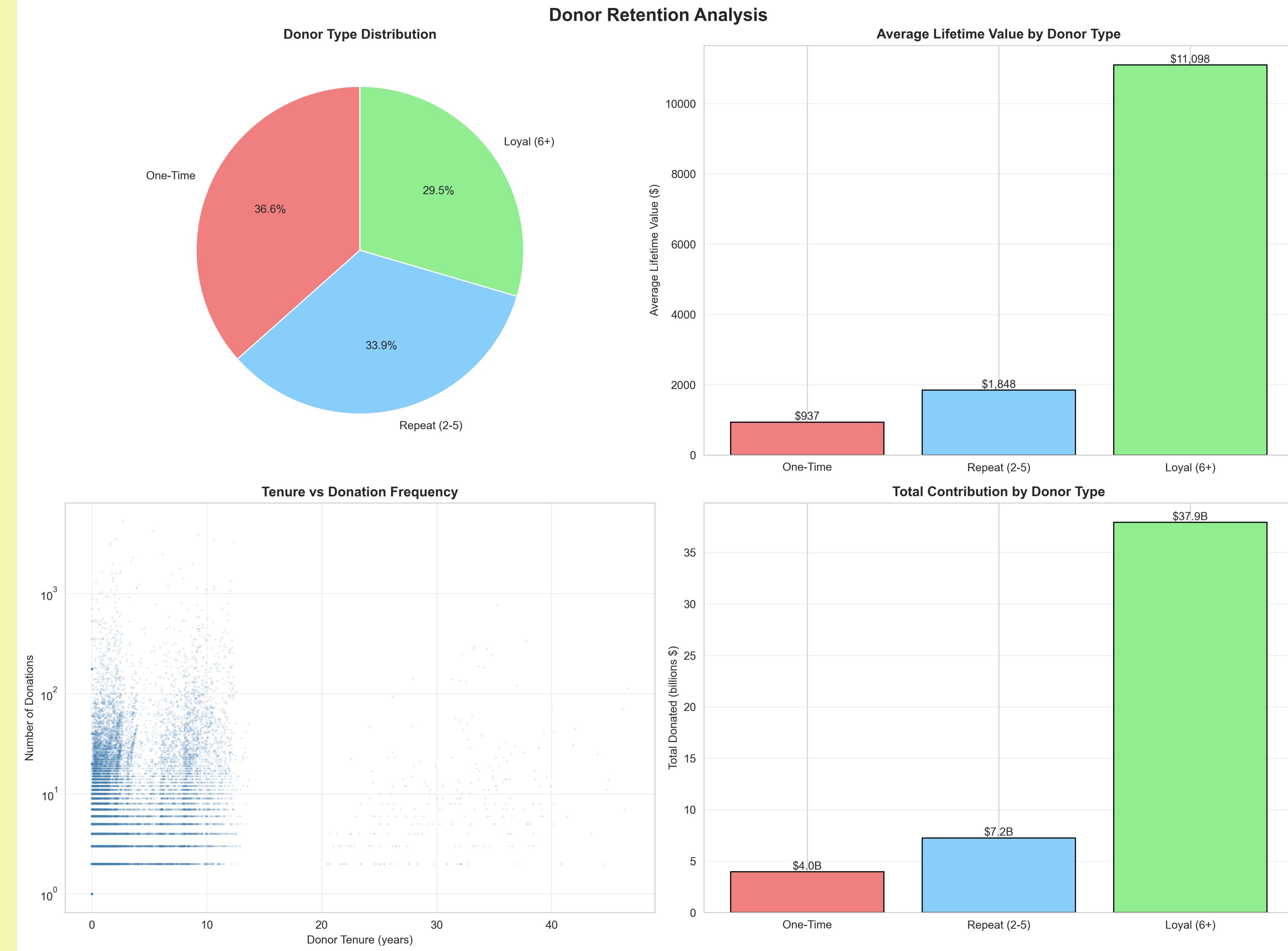


Top 15 Occupations by Avg Donation



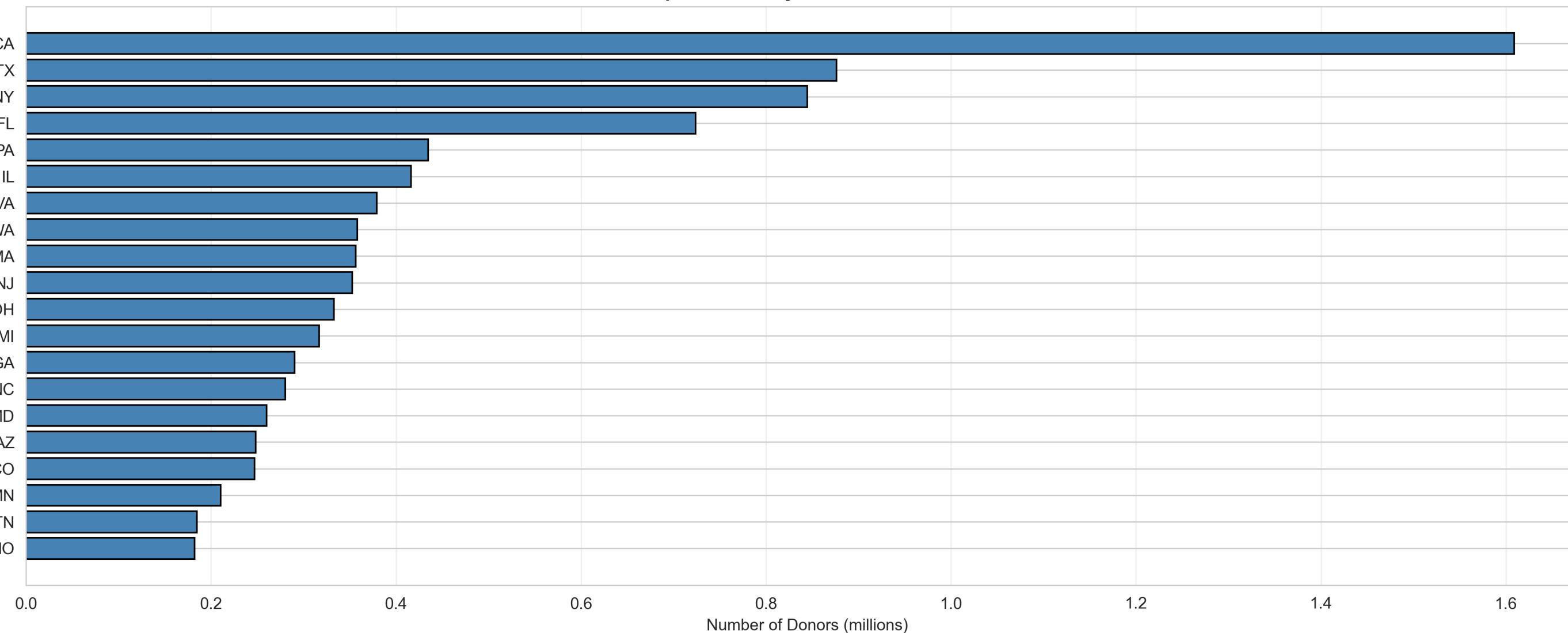
Top 15 Occupations by Donor Count



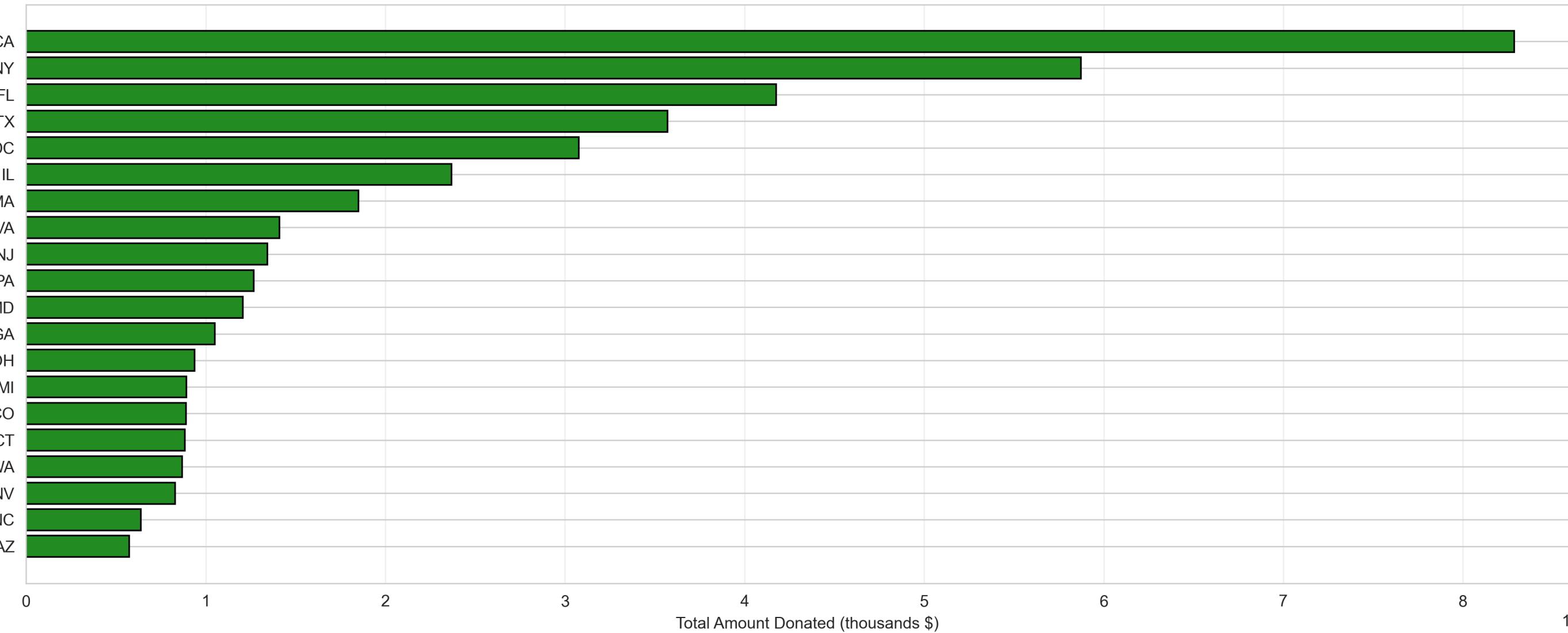


Geographic Analysis - Top 20 States

Top 20 States by Number of Donors



Top 20 States by Total Donation Amount



MODELS

LOGISTIC REGRESSION

MODELS

Supervised Learning

Stage 1

PARTY

Logistic Regression

Random Forest

Gradient Decent

VS

K-Means + KNN

K Means Clustering

KNN (K Nearest Neighbor)

Stage 2

AMOUNT X (6 parties)

Ridge Regression

Random Forest Regressor

Light GBM Regressor

INPUT

state

zip_prefix

employer_grouped

total_donations

total_amount

avg_donation_amount

donations_last_2years

amount_last_2years

recency_days

donor_tenure_days

donation_requency

unique_committees

party_diversity

first_donation_year

party_loyalty

recent_acitivity_ratio

etc.

OUTPUTS

What we're trying to find:

For a specific donor, find the distribution of donations towards each political party's recipients.

Input info for all FEC tracked donation info for the donor we're interested in

Output info (multiple outputs) - \$ contribution towards each political party

dem_amount

rep_amount

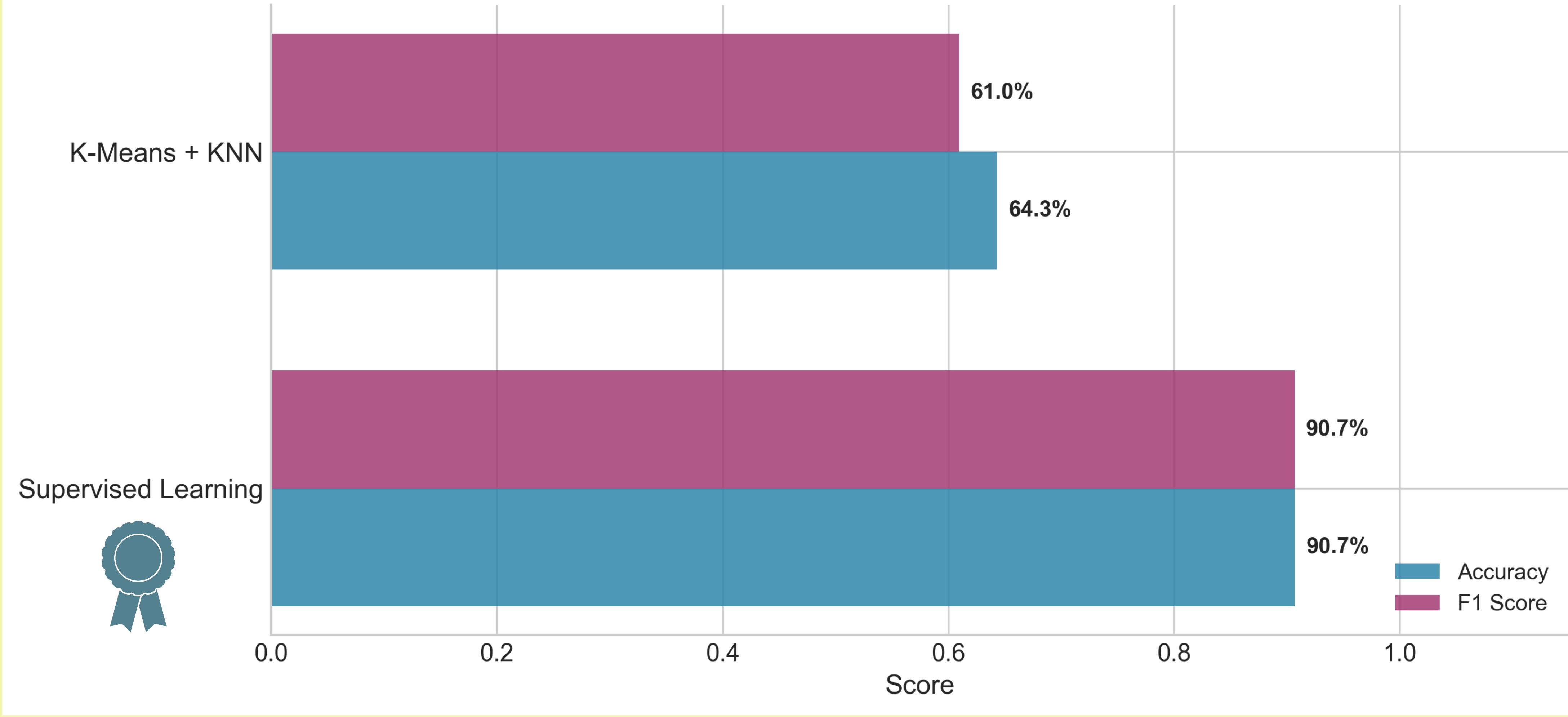
lib_amount

gre_amount

ind_amount

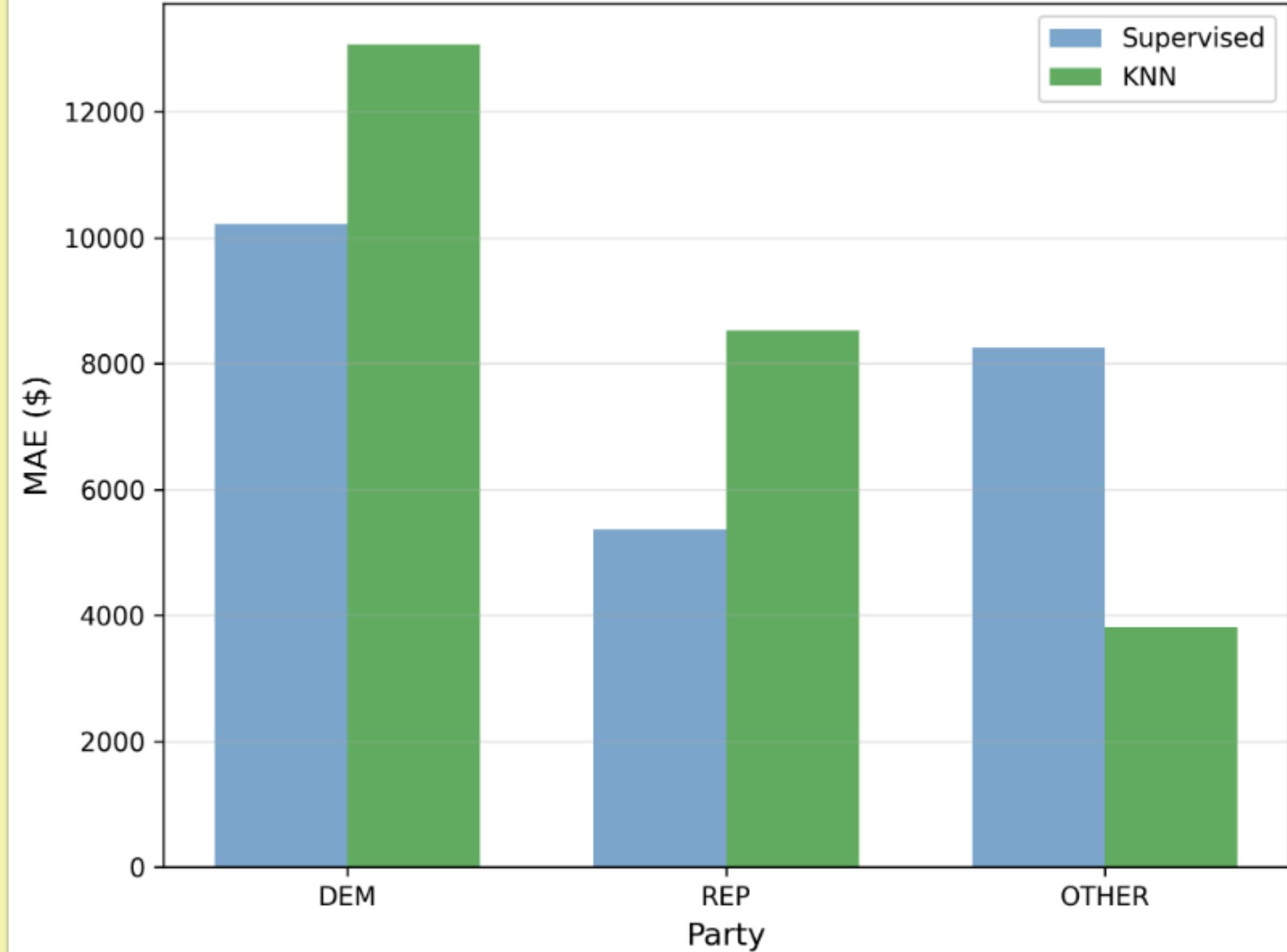
other_amount

Model Performance Comparison

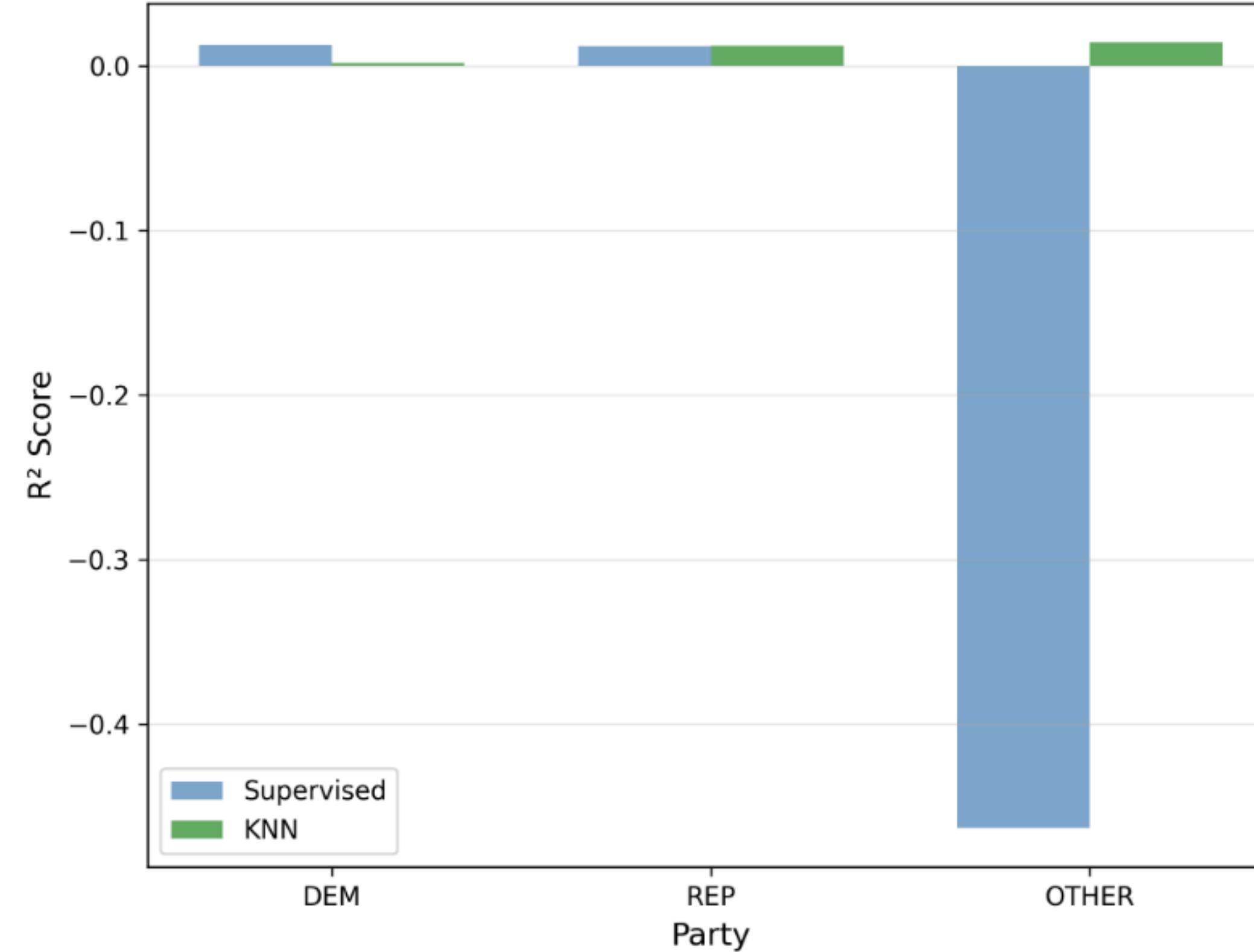


Donation Amount Prediction Comparison

Mean Absolute Error by Party



R² Score by Party



Random Predictions

Model Prediction Results
Accuracy: 90% (9/10 correct)

Contributor	State	Actual	Predicted	DEM \$	REP \$	Match
JOHN GREEN	TN	DEM	DEM	\$1,822	\$0	Y
RAYMOND BATTEN	NJ	DEM	DEM	\$900	\$0	Y
KHEMO GODHWANI	CA	DEM	DEM	\$5,400	\$0	Y
ROBERT MARTINEZ	CA	DEM	IND	\$116	\$82	X
CAROL MAXWELL	GA	DEM	DEM	\$800	\$0	Y
BRYAN DANFORTH	NY	REP	REP	\$250	\$500	Y
JAMES BRAGG	AZ	REP	REP	\$0	\$500	Y
NOLAN JACKSON	TX	REP	REP	\$0	\$790	Y
MARILYN FORBES	MS	REP	REP	\$0	\$6,870	Y
JAMES HALL	NJ	REP	REP	\$0	\$250	Y

SDSU Faculty Predictions

Model Prediction Results
Accuracy: 100% (10/10 correct)

Contributor	State	Actual	Predicted	DEM \$	REP \$	Match
REBECCA LEWISON	CA	DEM	DEM	\$2,556	\$0	Y
LORI JOHNSON	CA	DEM	DEM	\$5,729	\$0	Y
JOSEPH BALL	CA	DEM	DEM	\$840	\$0	Y
DWAINE CHAPEL	SD	REP	REP	\$0	\$4,500	Y
DOUGLAS FISHER	CA	DEM	DEM	\$3,000	\$0	Y
TIM REED	SD	REP	REP	\$0	\$749	Y
DONNA STEWART	CA	REP	REP	\$0	\$2,700	Y
LORI JOHNSON	CA	DEM	DEM	\$2,008	\$0	Y
PAUL GANSTER	CA	DEM	DEM	\$1,136	\$0	Y
DOUG FISHER	CA	DEM	DEM	\$2,094	\$0	Y



South Dakota State University

High Net-worth REP in San Diego Predictions

Model Prediction Results
Accuracy: 90% (9/10 correct)

Contributor	Actual	Predicted	DEM Actual	DEM Pred	REP Actual	REP Pred	Match
DANA ZEFF	REP	REP	\$2,154,000	\$638,809	\$2,756,800	\$171,394	Y
DAVID SHTEREMBERG	REP	REP	\$1,584,500	\$1,584,500	\$2,097,315	\$2,097,315	Y
STACY ROSENBERG	REP	REP	\$1,424,500	\$638,809	\$1,794,500	\$171,394	Y
IRA FEINSWOG	REP	REP	\$1,357,500	\$1,357,500	\$1,754,000	\$1,754,000	Y
STEVE HAMERSLAG	REP	REP	\$742,500	\$742,500	\$963,600	\$963,600	Y
DAN FEDER	REP	REP	\$531,000	\$531,000	\$683,500	\$683,500	Y
ARTHUR KLITOFSKY	REP	REP	\$442,100	\$442,100	\$568,800	\$568,800	Y
NEAL BLUE	REP	OTHER	\$0	\$17,832	\$450,000	\$3,520	X
SONYA JINICH	REP	REP	\$337,500	\$337,500	\$438,012	\$438,012	Y
JAMES BLUE	REP	REP	\$0	\$2,407	\$320,600	\$56,928	Y

TOP 5 INDEPENDENT FEATURES

Top 5 Predictive Features (Independent)

- 1. Donation Frequency** How often they gave
- 2. Geographic Location** Where they live (state/Zip)
- 3. Recent Activity** Donations in the last 2 years
- 4. Committee Diversity** How many a contributor supports
- 5. Donor Classification** Frequent vs occasional

BONUS FINDINGS

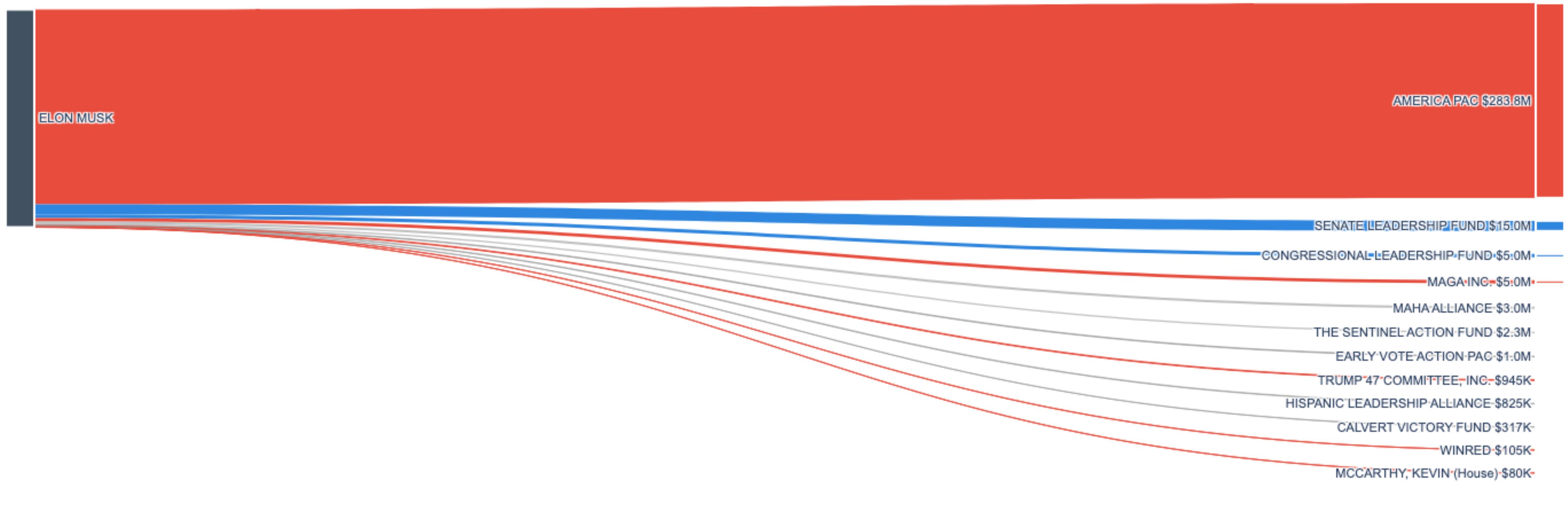
TOP CONTRIBUTORS

ELON MUSK (CA,TX)

Total Donations: \$317,872,136

Employer(s): SELF EMPLOYED | SPACE EXPLORATION TECHNOLOGIES CORP. | SP...

Consolidated from 14 contributor records

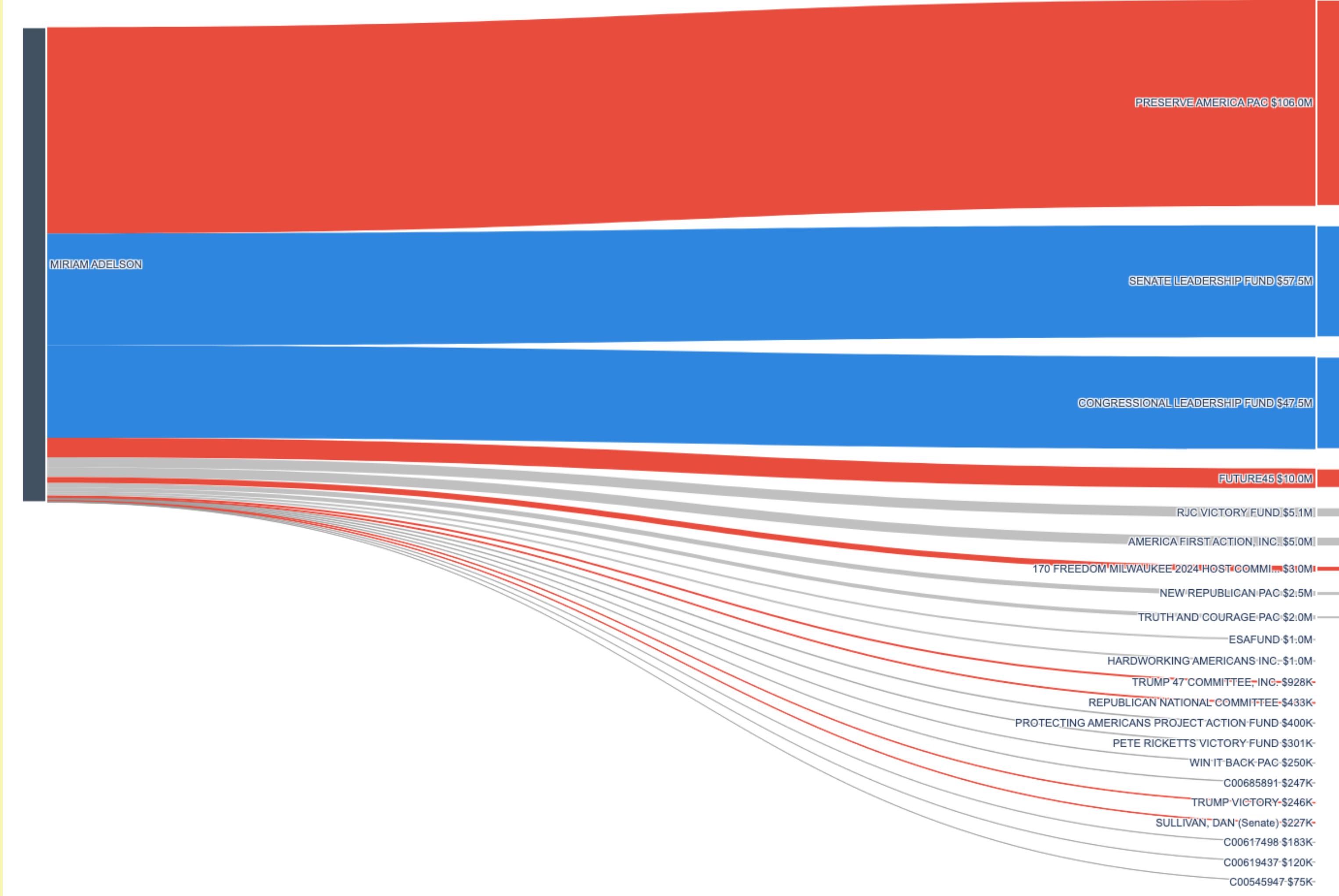


MIRIAM ADELSON (CA,NV)

Total Donations: \$244,645,682

Employer(s): ADELSON CLINIC | ADELSON DRUG CLINIC | JEWELRY BUYER | NU...

Consolidated from 11 contributor records



THINGS TO EXPAND ON

- Have potential recipient to be input and match with potential donors
 - Current limitation: FEC data doesn't provide significant info on recipients (just donors)
 - Take into account of the date (people can change political affiliations)
 - Account for name or location change
 - Capture granularity of levels of campaign (FEC data currently doesn't have that granularity).
-

QUESTIONS?

Thank you!
