

Data set

+ eligibility threshold

- ① Annual agent salary → ~~每个~~ salary cost.
- ③ existing agent count.

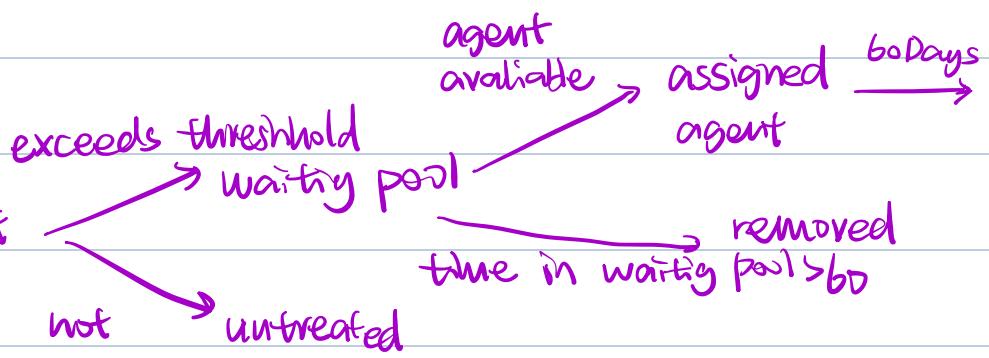
A	B	C
Country	Annual_Agent_Salary_USD	Advertiser_Eligibility_Threshold_USD
USA	77721	35000
UK	51650	27000
Germany	51328	26000
India	14118	13000
Brazil	27950	29000
Japan	49545	17000
Australia	43505	16000

- ② Advertiser sign ups. historical data? ~~历史数据~~
 ~~历史数据~~

A	B	C	D	E
1	Advertiser_ID	Country	Sign_Up_Date	Projected_Annual_Budget
2	A000001	USA	2023-01-01	84376
3	A000002	USA	2023-01-01	57297
4	A000003	USA	2023-01-01	34081
5	A000004	USA	2023-01-01	154506
6	A000005	USA	2023-01-01	23604
7	A000006	USA	2023-01-01	4340
8	A000007	USA	2023-01-01	8851

Process

Step 1.
predict annual budget



① annual budget → Dataset forecast monthly sign ups \times eligibility rate
= eligible per month

② optimize agent staffing

Decision: ~~TFN~~ fire/hire

Decision V: number of agents hired per month h_i ($i = 1 \dots 12$)
fired f_i

Constraints:
 ① sufficient support:
 ② agent max 10 simultaneously

Objective fn: min cost salary \times count + firing cost
max uplift, min waiting time.
first objective? → revenue impact ?
Assumption: (客户预期) expectation

match
Waiting pool ← → agent Takes?

current load	available	Available or not	Next available date
8	2	Yes / 10	---

everyday. ① check agent availability

- ② Assign advertiser → revenue
- ③ update Available or not and Next available date

improvement thoughts: ① other data set eg. US region