

Data Mining: Employee Attrition

Data Description

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Data Table

	Age	Attrition	BusinessTravel	Department	DistanceFromHome	Education	EducationField	EmployeeNumber	EnvironmentSatisfaction	Gender	JobInvolvement	JobLevel	JobRole	JobSatisfaction	MaritalStatus	MonthlyIncome	NumCompaniesWorked	PerformanceRating	RelationshipSatisfaction	StockOptionLevel	TotalWorkingYears	TrainingTimesLastYear	WorkLifeBalance	YearsAtCompany	YearsInCurrentRole	YearsSinceLastPromotion	YearsWithCurrManager	
0	41	Yes	Travel_Rarely	Sales	1	2	Life Sciences	1	2	Female	3	2	Sales Executive	4	Single	5993	8	3	1	0	8	0	1	6	4	0	5	
1	49	No	Travel_Frequently	Research & Development	8	1	Life Sciences	2		3	Male	2	2	Research Scientist	2	Married	5130	1	4	4	1	10	3	3	10	7	1	7
2	37	Yes	Travel_Rarely	Research & Development	2	2	Other	4		4	Male	2	1	Laboratory Technician	3	Single	2090	6	3	2	0	7	3	3	0	0	0	0
3	33	No	Travel_Frequently	Research & Development	3	4	Life Sciences	5		4	Female	3	1	Research Scientist	3	Married	2909	1	3	3	0	8	3	3	8	7	3	0
4	27	No	Travel_Rarely	Research & Development	2	1	Medical	7		1	Male	3	1	Laboratory Technician	2	Married	3468	9	3	4	1	6	3	3	2	2	2	2
5	32	No	Travel_Frequently	Research & Development	2	2	Life Sciences	8		4	Male	3	1	Laboratory Technician	4	Single	3068	0	3	3	0	8	2	2	7	7	3	6
6	59	No	Travel_Rarely	Research & Development	3	3	Medical	10		3	Female	4	1	Laboratory Technician	1	Married	2670	4	4	1	3	12	3	2	1	0	0	0
7	30	No	Travel_Rarely	Research & Development	24	1	Life Sciences	11		4	Male	3	1	Laboratory Technician	3	Divorced	2693	1	4	2	1	1	2	3	1	0	0	0
8	38	No	Travel_Frequently	Research & Development	23	3	Life Sciences	12		4	Male	2	3	Manufacturing Director	3	Single	9526	0	4	2	0	10	2	3	9	7	1	8
9	36	No	Travel_Rarely	Research & Development	27	3	Medical	13		3	Male	3	2	Healthcare Representative	3	Married	5237	6	3	2	2	17	3	2	7	7	7	7
10	35	No	Travel_Rarely	Research & Development	16	3	Medical	14		1	Male	4	1	Laboratory Technician	2	Married	2426	0	3	3	1	6	5	3	5	4	0	3
11	29	No	Travel_Rarely	Research & Development	15	2	Life Sciences	15		4	Female	2	2	Laboratory Technician	3	Single	4193	0	3	4	0	10	3	3	9	5	0	8
12	31	No	Travel_Rarely	Research & Development	26	1	Life Sciences	16		1	Male	3	1	Research Scientist	3	Divorced	2911	1	3	4	1	5	1	2	5	2	4	3
13	34	No	Travel_Rarely	Research & Development	19	2	Medical	18		2	Male	3	1	Laboratory Technician	4	Divorced	2661	0	3	3	1	3	2	3	2	1	2	2
14	28	Yes	Travel_Rarely	Research & Development	24	3	Life Sciences	19		3	Male	2	1	Laboratory Technician	3	Single	2028	5	3	2	0	6	4	3	4	2	0	3
15	29	No	Travel_Rarely	Research & Development	21	4	Life Sciences	20		2	Female	4	3	Manufacturing Director	1	Divorced	9980	1	3	3	1	10	1	3	10	9	8	8
16	32	No	Travel_Rarely	Research & Development	5	2	Life Sciences	21		1	Male	4	1	Research Scientist	2	Divorced	3298	0	3	2	4	2	7	5	2	6	2	5
17	22	No	Non-Travel	Research & Development	16	2	Medical	22		4	Male	4	1	Laboratory Technician	4	Divorced	2935	1	3	2	2	1	2	2	1	0	0	0
18	53	No	Travel_Rarely	Sales	2	4	Life Sciences	23		1	Female	2	4	Manager	4	Married	15427	2	3	3	0	31	3	3	25	8	3	7
19	38	No	Travel_Rarely	Research & Development	2	3	Life Sciences	24		4	Male	3	1	Research Scientist	4	Single	3944	5	3	3	0	6	3	3	3	2	1	2
20	24	No	Non-Travel	Research & Development	11	2	Other	26		1	Female	4	2	Manufacturing Director	3	Divorced	4011	0	3	4	1	5	5	2	4	2	1	3
21	36	Yes	Travel_Rarely	Sales	9	4	Life Sciences	27		3	Male	2	1	Sales Representative	1	Single	3407	7	4	2	0	10	4	3	5	3	0	3
22	34	No	Travel_Rarely	Research & Development	7	4	Life Sciences	28		1	Female	3	3	Research Director	2	Single	11994	0	3	3	0	13	4	3	12	6	2	11
23	21	No	Travel_Rarely	Research & Development	15	2	Life Sciences	30		3	Male	3	1	Research Scientist	4	Single	1232	1	3	4	0	0	6	3	0	0	0	0
24	34	Yes	Travel_Rarely	Research & Development	6	1	Medical	31		2	Male	3	1	Research Scientist	1	Single	2960	2	3	3	0	8	2	3	4	2	1	3
25	53	No	Travel_Rarely	Research & Development	5	3	Other	32		3	Female	3	5	Manager	3	Divorced	19094	4	3	4	1	26	3	2	14	13	4	8
26	32	Yes	Travel_Frequently	Research & Development	16	1	Life Sciences	33		2	Female	1	1	Research Scientist	1	Single	3919	1	4	2	0	10	5	3	10	2	6	7
27	42	No	Travel_Rarely	Sales	8	4	Marketing	35		3	Male	3	2	Sales Executive	2	Married	6825	0	3	4	1	10	2	3	9	7	4	2
28	44	No	Travel_Rarely	Research & Development	7	4	Medical	36		1	Female	2	3	Healthcare Representative	4	Married	10248	3	3	4	1	24	4	3	22	6	5	17
29	46	No	Travel_Rarely	Sales	2	4	Marketing	38		2	Female	3	5	Manager	1	Single	18947	3	3	4	0	22	2	2	2	2	2	1
30	33	No	Travel_Rarely	Research & Development	2	3	Medical	39		3	Male	3	1	Laboratory Technician	4	Single	2496	4	3	4	0	7	3	3	1	1	0	0
31	44	No	Travel_Rarely	Research & Development	10	4	Other	40		4	Male	3	2	Healthcare Representative	4	Married	6465	2	3	4	0	9	5	4	4	2	1	3
32	30	No	Travel_Rarely	Research & Development	9	2	Medical	41		4	Male	2	1	Laboratory Technician	3	Single	2206	1	3	1	0	10	5	3	10	0	1	8
33	39	Yes	Travel_Rarely	Sales	5	3	Technical Degree	42		4	Male	3	2	Sales Representative	4	Married	2086	3	3	3	1	19	6	4	1	0	0	0
34	24	Yes	Travel_Rarely	Research & Development	1	3	Medical	45		2	Male	3	1	Research Scientist	4	Married	2293	2	3	1	1	6	2	2	2	0	2	0
35	43	No	Travel_Rarely	Research & Development	2	2	Medical	46		4	Female	4	1	Research Scientist	3	Divorced	2645	1	3	4	2	6	3	2	5	3	1	4
36	50	Yes	Travel_Rarely	Sales	3	2	Marketing	47		1	Male	2	1	Sales Representative	3	Married	2683	1	3	3	0	3	2	3	3	2	0	2
37	35	No	Travel_Rarely	Sales	2	3	Marketing	49		4	Female	3	1	Sales Representative	4	Married	2014	1	3	1	0	2	3	3	2	2	2	0
38	36	No	Travel_Rarely	Research & Development	5	4	Life Sciences	51		2	Female	2	1	Research Scientist	1	Married	3419	9	3	4	1	6	3	4	1	1	0	0
39	33	No	Travel_Frequently	Sales	1	3	Life Sciences	52		3	Female	4	2	Sales Executive	1	Married	5376	2	3	1	2	10	3	3	5	3	1	3
40	35	No	Travel_Rarely	Research & Development	4	2	Other	53		3	Male	3	1	Laboratory Technician	4	Divorced	1951	1	3	3	1	1	3	3	1	0	0	0
41	27	No	Travel_Rarely	Research & Development	2	4	Life Sciences	54		4	Female	3	1	Laboratory Technician	1	Divorced	2341	1	3	4	1	1	6	3	1	0	0	0
42	26	Yes	Travel_Rarely	Research & Development	25	3	Life Sciences	55		1	Male	3	1	Laboratory Technician	3	Single	2293	1	3	3	0	1	2	2	1	0	0	1
43	27	No	Travel_Frequently	Sales	8	3	Life Sciences	56		4	Male	3	3	Sales Executive	3	Single	8726	1	3	4	0	9	0	3	9	8	1	7
44	30	No	Travel_Frequently	Research & Development	1	2	Medical	57		3	Female	3	2	Laboratory Technician	4	Single	4011	1	4	4	0	12	2	3	12	8	3	7
45	41	Yes	Travel_Rarely	Research & Development	12	3	Technical Degree	58		2	Female	3	5	Research Director	3	Married	19545	1	3	4	0	23	0	3	22	15	15	8
46	34	No	Non-Travel	Sales	23	4	Marketing	60		2	Male	3	2	Sales Executive	3	Single	4568	0	4	3	0	10	2	3	9	5	8	7
47	37	No	Travel_Rarely	Research & Development	19	2	Life Sciences	61		2	Male	3	1	Research Scientist	2	Married	3022	4	4	1	0	8	1	3	1	0	0	0
48	46	No	Travel_Frequently	Sales	5	4	Marketing	62		1	Male	3	2	Sales Executive	4	Single	5772	4	4	3	0	14	4	3	9	6	0	8
49	35	No	Travel_Rarely	Research & Development	8	1	Life Sciences	63		4	Male	4	1	Laboratory Technician	4	Married	2269	1	3	4	0	1	2	3	1	0	0	1
50	48	Yes	Travel_Rarely	Research & Development	1	2	Life Sciences	64		1	Male	2	3	Laboratory Technician	3	Single	5381	9	3	4	0	23	2	3	1	0	0	0
51	28	Yes	Travel_Rarely	Research & Development	5	4	Technical Degree	65		3	Male	3	1	Laboratory Technician	3	Single	3441	1	3	3	0	2	3	2	2	2	2	2
52	44	No	Travel_Rarely	Sales	1	5	Marketing	68		2	Female	3	2	Sales Executive	1	Divorced	5454	5	4	3	1	9	2	2	4	3	1	3
53	35	No	Non-Travel	Research & Development	11	2	Medical	70		3	Male	2	3	Healthcare Representative	1	Married	9884	2	3	3	1	10	3	3	4	0	2	3
54	26	No	Travel_Rarely	Sales	23	3	Marketing	72		3	Female	2	2	Sales Executive	4	Married	4157	7	3	3	1	5	2	2	2	0	0	0
55	33	No	Travel_Frequently	Research & Development	1	2	Life Sciences	73		1	Female	3	3	Research Director	4	Single	13458	1	3	3	0	15	1	3	15	14	8	12
56	35	No	Travel_Frequently	Sales	18	5	Life Sciences	74		2	Male	3	3	Sales Executive	1	Married	9069	1	4	4	1	9	3	2	9	8	1	8
57	35	No	Travel_Rarely	Research & Development	23	4	Medical	75		3	Female	3	1	Laboratory Technician	1	Married	4014	3	3	3	1	4	3	3	2	2	2	2
58	31	No	Travel_Rarely	Research & Development	7	4	Life Sciences	76		4	Male	3	2	Laboratory Technician	4	Divorced	5915	3	4	4	1	10	3	2	7	7	1	7
59	37	No	Travel_Rarely	Research & Development	1	4	Life Sciences	77		1	Male	2	2	Manufacturing Director	3	Divorced	5993	1	3	3	1	7	2	4	7	5	0	7
60	32	No	Travel_Rarely	Research & Development	1	3	Medical	78		1	Male	3	2	Manufacturing Director	4	Married	6162	1	4	2	1	9	3	3	9	8	7	8
61	38	No	Travel_Frequently	Research & Development	29	5	Life Sciences	79		4	Female	3	2	Laboratory Technician	4	Single	2406	1	3	4	0	10	2	3	10	3	9	9
62	50	No	Travel_Rarely	Research & Development	7	2	Medical	80		2	Female	2	5	Research Director	3	Divorced	18740	5	3	4	1	29	2	2	27	3	13	8

Data Description (Categorical)

- * Attrition (Bool): True / False
- * BusinessTravel: 是否常常出差
- * Department: 隸屬部門
- * EducationField: 教育背景（科系）
- * Gender: 性別
- * JobRole: 職位
- * MaritalStatus: 婚姻狀態

```
BusinessTravel ['Travel_Rarely' 'Travel_Frequently' 'Non-Travel']
=====
Department ['Sales' 'Research & Development' 'Human Resources']
=====
EducationField ['Life Sciences' 'Other' 'Medical' 'Marketing' 'Technical Degree'
'Human Resources']
=====
Gender ['Female' 'Male']
=====
JobRole ['Sales Executive' 'Research Scientist' 'Laboratory Technician'
'Manufacturing Director' 'Healthcare Representative' 'Manager'
'Sales Representative' 'Research Director' 'Human Resources']
=====
MaritalStatus ['Single' 'Married' 'Divorced']
=====
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Data Description (Numeric)

- * Age: 年齡
- * DistanceFromHome: 公司離家距離
- * Education: 'Below College': 0, 'College': 1, 'Bachelor': 2, 'Master': 3, 'Doctor': 4
- * EmployeeNumber: 公司人數
- * EnvironmentSatisfaction: 對工作環境滿意度
- * JobInvolvement: 工作參與度
- * JobLevel: 職位等級
- * JobSatisfaction: 對工作滿意度
- * MonthlyIncome: 月收入
- * NumCompaniesWorked: 曾經工作過的公司數量
- * PerformanceRating: 工作表現
- * RelationshipSatisfaction: 感情表現
- * StockOptionLevel: 股票選擇權
- * TotalWorkingYears: 總工作年數
- * TrainingTimesLastYear: 去年訓練次數
- * WorkLifeBalance: 工作與生活平衡滿意度
- * YearsAtCompany: 待在公司年數
- * YearsInCurrentRole: 待在此職位年數
- * YearsSinceLastPromotion: 距離上次升職年數
- * YearsWithCurrManager: 與現任經理共事年數