Dataset Description

The dataset used in this project is titled "**Combined Life Insurance with Churn Reason**" and contains structured records of individual insurance policy applications, customer demographics, medical and financial risk indicators, and outcomes of the underwriting process.

The dataset consists of structured tabular data with each row representing a unique insurance application record. It provides the necessary input to build an automated underwriting engine by capturing the following:

1.**Application_id:** Unique identifier for each insurance application.

2.**Age :**Age of the applicant at the time of application.

3.**Gender :**Gender of the applicant (e.g., Male, Female).

4.**Bmi:** Body Mass Index of the applicant.

5.**Smoker :**Indicates whether the applicant is a smoker (Yes or No).

6.**Income :**Annual income of the applicant in local currency.

7.**Occupation:** Applicant's current occupation (e.g., Engineer, Doctor, etc.).

8.**Marital_status:** Marital status (e.g., Single, Married, Divorced).

9.**Dependents:** Number of dependents supported by the applicant.

10.**Policy_term_years :**Term/duration of the insurance policy in years.

11.**Coverage_amount:** Total coverage amount or insured sum under the policy.

12.**Existing_conditions:** Pre-existing health conditions of the applicant (e.g., Diabetes, Asthma).

13.**Previous_claims:** Number of previous insurance claims made by the applicant.

14.**Application_channel:** Channel through which the application was submitted (Online/Agent/Branch).

15.**Underwriting_decision :** Outcome of the underwriting process (Approved, Rejected, etc.).

16.**Credit_score:** Applicant's financial credit score (numeric value).

17.**Education_level:** Highest educational qualification of the applicant.

18.**Employment_status:** Employment type (e.g., Employed, Self-Employed, Unemployed).

19.**Residence_type :** Type of residence (e.g., Owned, Rented, Company Provided).

20.**City_tier:** Tier classification of the applicant's city (e.g., Tier 1, Tier 2).

21.**Risk_aversion_score:** A numeric score representing the risk behavior of the applicant.

22.**Internet_usage_hours:** Average daily internet usage in hours.

23.**Phone_contact_frequency:** Average number of phone contacts per day.

24.**Churn_reason:** If applicable, the reason the applicant chose not to proceed with the policy.

combined_life_insurance_with_churn_reason

application_id	age	gender	bmi	smoker	income	occupation	marital_status	dependents	policy_term_years	coverage_amount	existing_conditions	previous_claims	application_channel	underwriting_decision	credit_score	education_level	employment_status	residence_type	city_tier	risk_aversion_score	internet_usage_hours	phone_contact_frequency	churn_reason
AID100000	56	Female	23.8	Yes	63418	Other	Widowed	3	20	549238	None	3	Online	Reject	611	Master	Retired	Owned	Tier 2	0.22	4	13	No longer needed
AID100001	69	Female	29.5	Yes	29612	Doctor	Married	2	30	895394	Diabetes	3	Agent	Refer	800	High School	Employed	Mortgaged	Tier 2	0.12	3	9	Policy matured
AID100002	46	Female	24.5	No	193886	Sales	Single	1	25	444743	Hypertension	1	Online	Approve	762	Master	Retired	Mortgaged	Tier 3	0.62	3	8	Life event (e.g., marriage/divorce)
AID100003	32	Female	13.8	Yes	105002	Other	Divorced	4	10	186514	None	0	Branch	Approve	398	PhD	Unemployed	Owned	Tier 1	0.73	2	0	No longer needed
AID100004	60	Male	28.0	No	152703	Teacher	Divorced	4	15	510584	Diabetes	0	Branch	Approve	497	PhD	Employed	Rented	Tier 1	0.31	11	9	Dissatisfied with service
AID100005	25	Female	18.6	No	77211	Lawyer	Divorced	3	25	699005	Hypertension	3	Online	Reject	742	Other	Retired	Owned	Tier 3	0.28	1	7	Life event (e.g., marriage/divorce)
AID100006	38	Male	32.1	No	166524	Doctor	Divorced	2	10	893696	None	1	Agent	Approve	566	Bachelor	Self-employed	Mortgaged	Tier 3	0.72	5	3	Life event (e.g., marriage/divorce)
AID100007	56	Female	21.3	Yes	98105	Engineer	Married	3	25	227306	Cancer	0	Branch	Refer	686	High School	Retired	Rented	Tier 1	0.65	0	10	No longer needed
AID100008	36	Male	14.7	Yes	191972	Lawyer	Widowed	1	25	946022	None	2	Branch	Approve	461	Master	Retired	Owned	Tier 1	0.84	9	5	Better offer elsewhere
AID100009	40	Male	18.2	No	173554	Other	Widowed	3	15	473970	None	1	Branch	Approve	776	High School	Retired	Mortgaged	Tier 1	0.34	7	2	Dissatisfied with service
AID100010	28	Male	26.8	No	55472	Other	Divorced	4	15	739381	None	3	Agent	Reject	694	Bachelor	Employed	Mortgaged	Tier 1	0.73	3	13	No longer needed
AID100011	28	Male	27.9	No	107460	Teacher	Married	3	25	998714	Hypertension	0	Online	Approve	552	Bachelor	Retired	Rented	Tier 1	0.27	11	10	Dissatisfied with service
AID100012	41	Male	19.9	No	138123	Engineer	Widowed	4	25	501965	None	0	Branch	Approve	750	High School	Self-employed	Rented	Tier 1	0.32	11	5	Dissatisfied with service
AID100013	70	Female	21.6	No	192242	Teacher	Widowed	0	20	96361	None	0	Branch	Refer	726	PhD	Employed	Rented	Tier 1	0.56	11	6	Life event (e.g., marriage/divorce)
AID100014	53	Male	27.0	Yes	100379	Doctor	Married	1	10	406557	Diabetes	3	Online	Reject	739	Bachelor	Unemployed	Rented	Tier 1	0.85	0	8	Policy matured
AID100015	57	Female	31.9	No	186987	Lawyer	Divorced	1	30	116722	Hypertension	3	Agent	Reject	460	Master	Employed	Owned	Tier 2	0.36	1	6	Dissatisfied with service
AID100016	41	Male	20.9	Yes	115554	Sales	Married	4	30	354552	Diabetes	1	Online	Approve	327	High School	Unemployed	Owned	Tier 3	0.28	0	11	Switched to employer insurance
AID100017	20	Male	28.9	Yes	28057	Other	Divorced	0	20	406485	None	2	Online	Approve	415	Bachelor	Unemployed	Mortgaged	Tier 2	0.66	10	10	Life event (e.g., marriage/divorce)
AID100018	39	Male	18.3	No	38883	Doctor	Married	2	25	304954	Diabetes	2	Agent	Approve	811	PhD	Employed	Owned	Tier 1	0.41	11	8	Better offer elsewhere
AID100019	70	Male	28.6	No	80014	Clerk	Single	3	25	929175	None	3	Online	Refer	356	High School	Retired	Owned	Tier 3	0.46	9	0	Policy matured
AID100020	19	Female	30.8	No	172522	Doctor	Married	2	20	757123	None	1	Agent	Approve	526	PhD	Self-employed	Mortgaged	Tier 3	0.63	7	5	Switched to employer insurance
AID100021	41	Female	29.6	No	176577	Sales	Married	0	30	844087	Hypertension	1	Online	Approve	444	Master	Unemployed	Rented	Tier 3	0.18	5	12	Switched to employer insurance
AID100022	61	Female	32.0	Yes	176962	Sales	Divorced	1	15	981380	None	3	Agent	Reject	590	Other	Unemployed	Mortgaged	Tier 2	0.38	4	0	Better offer elsewhere
AID100023	47	Male	31.6	No	128269	Clerk	Divorced	2	15	620862	None	3	Online	Reject	341	High School	Employed	Owned	Tier 3	0.62	5	4	Policy matured
AID100024	55	Male	36.2	No	55013	Clerk	Single	0	25	862494	None	0	Online	Approve	528	Master	Retired	Mortgaged	Tier 1	0.22	8	5	Life event (e.g., marriage/divorce)
AID100025	19	Male	27.5	Yes	185025	Engineer	Married	1	10	102103	Hypertension	2	Online	Approve	731	PhD	Unemployed	Mortgaged	Tier 3	0.59	8	12	Premium too high
AID100026	38	Male	36.2	No	153536	Teacher	Married	2	30	959292	Hypertension	0	Online	Approve	444	PhD	Self-employed	Rented	Tier 1	0.75	3	7	Policy matured
AID100027	50	Male	22.3	No	94111	Doctor	Widowed	1	10	98814	None	3	Online	Reject	653	PhD	Unemployed	Mortgaged	Tier 2	0.55	8	13	Better offer elsewhere
AID100028	29	Male	26.0	No	132839	Engineer	Divorced	4	25	261023	None	1	Agent	Approve	499	High School	Retired	Rented	Tier 1	0.55	4	3	Switched to employer insurance
AID100029	39	Female	26.4	No	66825	Clerk	Widowed	1	30	655276	Hypertension	2	Branch	Approve	364	Master	Self-employed	Rented	Tier 2	0.24	8	14	Life event (e.g., marriage/divorce)
AID100030	61	Male	21.8	No	180638	Engineer	Widowed	1	15	822159	Hypertension	1	Agent	Approve	427	PhD	Employed	Mortgaged	Tier 2	0.13	10	0	Policy matured
AID100031	42	Male	15.2	No	114035	Doctor	Widowed	0	15	500081	None	3	Branch	Reject	531	PhD	Retired	Mortgaged	Tier 2	0.16	2	10	Premium too high
AID100032	66	Female	31.3	No	21521	Teacher	Divorced	0	10	404813	None	2	Branch	Refer	724	Other	Employed	Mortgaged	Tier 1	0.56	0	2	Premium too high
AID100033	44	Female	22.4	No	37363	Sales	Married	3	30	864364	None	3	Online	Reject	541	Master	Unemployed	Mortgaged	Tier 2	0.5	0	11	Dissatisfied with service
AID100034	59	Female	25.0	No	100938	Doctor	Widowed	0	25	415986	Heart Disease	1	Online	Refer	493	Master	Unemployed	Rented	Tier 1	0.83	10	8	Dissatisfied with service
AID100035	45	Male	34.9	No	142159	Teacher	Single	4	20	630399	Diabetes	3	Online	Reject	543	Other	Unemployed	Mortgaged	Tier 3	0.44	3	10	No longer needed

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