

DS4002 Project 2 Logit Outputs

Group: Zany Zebras

October 2025

1 GPA

Dep. Variable:	ADMCN1_recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.002608			
Time:	17:39:43	Log-Likelihood:	-7591.2			
converged:	True	LL-Null:	-7611.0			
Covariance Type:	nonrobust	LLR p-value:	5.004e-08			
	coef	std err	z	P> z	[0.025	0.975]
const	-59.6089	28.731	-2.075	0.038	-115.921	-3.297
post_covid	-0.0528	0.084	-0.631	0.528	-0.217	0.111
year	0.0285	0.014	1.999	0.046	0.001	0.056
CONTROL_2	0.2620	0.049	5.309	0.000	0.165	0.359
CONTROL_3	0.0919	0.078	1.176	0.240	-0.061	0.245
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Dep. Variable:	ADMCN1_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.07457			
Time:	17:39:43	Log-Likelihood:	-10735.			
converged:	True	LL-Null:	-11600.			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	-94.6028	22.450	-4.214	0.000	-138.605	-50.601
post_covid	-0.0800	0.067	-1.197	0.231	-0.211	0.051
year	0.0476	0.011	4.280	0.000	0.026	0.069
CONTROL_2	-0.2677	0.040	-6.714	0.000	-0.346	-0.190
CONTROL_3	-2.0222	0.054	-37.130	0.000	-2.129	-1.915

2 School Rank

Dep. Variable:	ADMCN2.recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.06032			
Time:	17:39:43	Log-Likelihood:	-13318.			
converged:	True	LL-Null:	-14172.			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	1.4152	19.494	0.073	0.942	-36.793	39.623
post_covid	-0.0973	0.057	-1.708	0.088	-0.209	0.014
year	-0.0008	0.010	-0.086	0.931	-0.020	0.018
CONTROL_2	0.4504	0.031	14.310	0.000	0.389	0.512
CONTROL_3	-1.8740	0.073	-25.512	0.000	-2.018	-1.730
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Dep. Variable:	ADMCN2_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.05373			
Time:	17:39:43	Log-Likelihood:	-5932.3			
converged:	True	LL-Null:	-6269.1			
Covariance Type:	nonrobust	LLR p-value:	1.794e-144			
	coef	std err	z	P> z	[0.025	0.975]
const	248.5815	32.263	7.705	0.000	185.347	311.816
post_covid	0.0507	0.099	0.513	0.608	-0.143	0.244
year	-0.1240	0.016	-7.751	0.000	-0.155	-0.093
CONTROL_2	-0.9006	0.050	-17.910	0.000	-0.999	-0.802
CONTROL_3	-2.0135	0.135	-14.923	0.000	-2.278	-1.749

3 School Record

Dep. Variable:	ADMCON3_recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.04010			
Time:	17:39:43	Log-Likelihood:	-4933.9			
converged:	True	LL-Null:	-5140.0			
Covariance Type:	nonrobust	LLR p-value:	6.181e-88			
	coef	std err	z	P> z	[0.025	0.975]
const	-153.6753	38.320	-4.010	0.000	-228.781	-78.570
post_covid	-0.0271	0.109	-0.248	0.804	-0.241	0.187
year	0.0743	0.019	3.911	0.000	0.037	0.112
CONTROL_2	1.3917	0.087	16.049	0.000	1.222	1.562
CONTROL_3	0.8254	0.124	6.680	0.000	0.583	1.068
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Dep. Variable:	ADMCON3_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.02927			
Time:	17:39:43	Log-Likelihood:	-7051.3			
converged:	True	LL-Null:	-7263.9			
Covariance Type:	nonrobust	LLR p-value:	9.920e-91			
	coef	std err	z	P> z	[0.025	0.975]
const	94.9550	30.181	3.146	0.002	35.801	154.109
post_covid	-0.0437	0.087	-0.500	0.617	-0.215	0.128
year	-0.0456	0.015	-3.049	0.002	-0.075	-0.016
CONTROL_2	-0.8992	0.061	-14.664	0.000	-1.019	-0.779
CONTROL_3	-1.3999	0.077	-18.223	0.000	-1.551	-1.249

4 College Prep

Dep. Variable:	ADMCN4.recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.04981			
Time:	17:39:43	Log-Likelihood:	-13192.			
converged:	True	LL-Null:	-13884.			
Covariance Type:	nonrobust	LLR p-value:	3.215e-298			
	coef	std err	z	P> z	[0.025	0.975]
const	50.2953	19.599	2.566	0.010	11.883	88.708
post_covid	-0.0947	0.057	-1.649	0.099	-0.207	0.018
year	-0.0252	0.010	-2.596	0.009	-0.044	-0.006
CONTROL_2	0.6367	0.032	19.639	0.000	0.573	0.700
CONTROL_3	-1.2630	0.068	-18.649	0.000	-1.396	-1.130

Dep. Variable:	ADMCN4_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.09534			
Time:	17:39:43	Log-Likelihood:	-11421.			
converged:	True	LL-Null:	-12624.			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	-27.7834	21.430	-1.296	0.195	-69.786	14.219
post_covid	0.0049	0.062	0.078	0.938	-0.117	0.127
year	0.0137	0.011	1.291	0.197	-0.007	0.035
CONTROL_2	-0.9008	0.033	-27.610	0.000	-0.965	-0.837
CONTROL_3	-4.9932	0.269	-18.541	0.000	-5.521	-4.465

5 Recommendations

Dep. Variable:	ADMCON5_recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.01427			
Time:	17:39:43	Log-Likelihood:	-11773.			
converged:	True	LL-Null:	-11943.			
Covariance Type:	nonrobust	LLR p-value:	1.568e-72			
	coef	std err	z	P> z	[0.025	0.975]
const	-166.5366	21.600	-7.710	0.000	-208.871	-124.202
post_covid	-0.0460	0.062	-0.741	0.459	-0.168	0.076
year	0.0820	0.011	7.653	0.000	0.061	0.103
CONTROL_2	0.2169	0.036	6.095	0.000	0.147	0.287
CONTROL_3	-0.3868	0.062	-6.213	0.000	-0.509	-0.265
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Dep. Variable:	ADMCON5_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.1014			
Time:	17:39:43	Log-Likelihood:	-12205.			
converged:	True	LL-Null:	-13582.			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	90.1792	20.600	4.378	0.000	49.803	130.555
post_covid	-0.0510	0.060	-0.843	0.399	-0.169	0.068
year	-0.0454	0.010	-4.446	0.000	-0.065	-0.025
CONTROL_2	1.5817	0.038	41.906	0.000	1.508	1.656
CONTROL_3	-0.2572	0.067	-3.826	0.000	-0.389	-0.125

6 Competency Demonstrations

Dep. Variable:	ADMCN6_recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.02845			
Time:	17:39:44	Log-Likelihood:	-9110.3			
converged:	True	LL-Null:	-9377.1			
Covariance Type:	nonrobust	LLR p-value:	3.622e-114			
	coef	std err	z	P> z	[0.025	0.975]
const	-179.7053	25.787	-6.969	0.000	-230.246	-129.164
post_covid	-0.0683	0.073	-0.931	0.352	-0.212	0.076
year	0.0881	0.013	6.887	0.000	0.063	0.113
CONTROL_2	0.6412	0.045	14.368	0.000	0.554	0.729
CONTROL_3	-0.4063	0.086	-4.748	0.000	-0.574	-0.239
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Dep. Variable:	ADMCN6_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.01167			
Time:	17:39:44	Log-Likelihood:	-6530.9			
converged:	True	LL-Null:	-6608.0			
Covariance Type:	nonrobust	LLR p-value:	2.587e-32			
	coef	std err	z	P> z	[0.025	0.975]
const	21.2861	31.123	0.684	0.494	-39.713	82.285
post_covid	-0.0708	0.093	-0.764	0.445	-0.253	0.111
year	-0.0118	0.015	-0.764	0.445	-0.042	0.018
CONTROL_2	0.3259	0.057	5.674	0.000	0.213	0.438
CONTROL_3	0.9037	0.075	12.129	0.000	0.758	1.050

7 Standardized Test Scores (SAT/ACT)

Dep. Variable:	ADMCON7_recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.1273			
Time:	17:39:44	Log-Likelihood:	-11364.			
converged:	True	LL-Null:	-13021.			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	-274.9868	22.757	-12.084	0.000	-319.590	-230.384
post_covid	1.0276	0.063	16.293	0.000	0.904	1.151
year	0.1354	0.011	12.004	0.000	0.113	0.158
CONTROL_2	0.5517	0.037	14.833	0.000	0.479	0.625
CONTROL_3	0.3308	0.059	5.610	0.000	0.215	0.446
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Dep. Variable:	ADMCON7_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.2963			
Time:	17:39:44	Log-Likelihood:	-9785.0			
converged:	True	LL-Null:	-13905.			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	396.8549	22.892	17.336	0.000	351.988	441.722
post_covid	-1.6052	0.067	-24.078	0.000	-1.736	-1.475
year	-0.1961	0.011	-17.280	0.000	-0.218	-0.174
CONTROL_2	-0.9592	0.039	-24.818	0.000	-1.035	-0.883
CONTROL_3	-5.0807	0.157	-32.283	0.000	-5.389	-4.772

8 English Proficiency Test

Dep. Variable:	ADMCN8_recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.01935			
Time:	17:39:44	Log-Likelihood:	-7848.5			
converged:	True	LL-Null:	-8003.4			
Covariance Type:	nonrobust	LLR p-value:	8.283e-66			
	coef	std err	z	P> z	[0.025	0.975]
const	-61.7200	27.819	-2.219	0.027	-116.245	-7.196
post_covid	-0.0983	0.082	-1.206	0.228	-0.258	0.061
year	0.0294	0.014	2.129	0.033	0.002	0.056
CONTROL_2	0.6838	0.054	12.700	0.000	0.578	0.789
CONTROL_3	1.1601	0.070	16.625	0.000	1.023	1.297
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Dep. Variable:	ADMCN8_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.06117			
Time:	17:39:44	Log-Likelihood:	-12298.			
converged:	True	LL-Null:	-13100.			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	74.6936	20.698	3.609	0.000	34.127	115.261
post_covid	0.1131	0.061	1.868	0.062	-0.006	0.232
year	-0.0365	0.010	-3.556	0.000	-0.057	-0.016
CONTROL_2	-0.2394	0.035	-6.801	0.000	-0.308	-0.170
CONTROL_3	-1.9824	0.055	-36.343	0.000	-2.089	-1.875

9 Other Test

Dep. Variable:	ADMCON9_recommended	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.03400			
Time:	17:39:44	Log-Likelihood:	-3564.9			
converged:	True	LL-Null:	-3690.3			
Covariance Type:	nonrobust	LLR p-value:	4.107e-53			
	coef	std err	z	P> z	[0.025	0.975]
const	-398.8991	48.984	-8.143	0.000	-494.907	-302.891
post_covid	-0.3492	0.135	-2.581	0.010	-0.614	-0.084
year	0.1960	0.024	8.072	0.000	0.148	0.244
CONTROL_2	0.0530	0.083	0.641	0.521	-0.109	0.215
CONTROL_3	1.0589	0.101	10.533	0.000	0.862	1.256
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Dep. Variable:	ADMCON9_required	No. Observations:	20575			
Model:	Logit	Df Residuals:	20570			
Method:	MLE	Df Model:	4			
Date:	Thu, 23 Oct 2025	Pseudo R-squ.:	0.1623			
Time:	17:39:44	Log-Likelihood:	-6299.0			
converged:	True	LL-Null:	-7519.5			
Covariance Type:	nonrobust	LLR p-value:	0.000			
	coef	std err	z	P> z	[0.025	0.975]
const	-104.6325	31.465	-3.325	0.001	-166.303	-42.962
post_covid	-0.1215	0.093	-1.304	0.192	-0.304	0.061
year	0.0508	0.016	3.258	0.001	0.020	0.081
CONTROL_2	-0.7901	0.057	-13.871	0.000	-0.902	-0.678
CONTROL_3	2.0277	0.059	34.655	0.000	1.913	2.142