

TABLE V: Summary about how often each repair tool generates correct or incorrect patches across the defect classes

Defect	total	GenProg (%)		SPR (%)		Prophet (%)		Angelix (%)		Best (%)		
		rep/tot	cor/tot	rep/tot	cor/tot	rep/tot	cor/tot	rep/tot	cor/tot	rep/tot	cor/tot	
Higher	HBRN	85	44	5	68	7	64	7	58	8	80	15
	HCOM	35	54	26	54	9	46	9	31	11	77	34
	HDIM	7	43	29	43	14	43	0	29	14	57	43
	HDMS	204	66	57	62	48	44	29	34	25	87	77
	HEXP	78	31	9	60	5	56	6	51	6	77	20
	HIMS	442	35	12	38	9	34	7	29	4	57	22
Operand	HOTH	234	36	6	58	6	50	7	41	9	69	18
	DCCA	185	21	6	38	8	28	8	11	2	47	14
	DCCR	470	27	11	40	10	34	8	33	13	56	26
	DMAA	14	43	0	57	21	50	14	21	0	64	21
	DRAC	5	20	20	40	20	20	0	20	0	40	20
	DRVA	231	35	9	51	16	40	10	41	8	70	27
Operator	DRWV	121	38	8	62	17	57	14	40	3	78	28
	OAAN	33	24	6	58	15	48	9	33	6	70	21
	OAID	28	64	29	57	18	50	21	43	7	89	43
	OAIS	436	35	12	54	12	47	10	36	4	68	22
	OEDE	22	32	18	59	27	45	14	36	18	73	41
	OFFN	21	24	14	43	10	38	10	24	0	57	14
	OPPF	128	3	2	8	4	5	2	2	1	9	5
	OFPO	12	8	0	17	0	8	0	8	0	25	0
	OICD	6	50	17	50	17	33	0	50	0	67	17
	OILN	328	33	6	71	22	63	14	57	6	86	32
	OIRO	8	0	0	12	12	12	12	0	0	12	12
	OITC	13	0	0	23	0	23	0	8	0	23	0
	OLLN	18	39	6	67	0	44	0	72	22	89	22
	OMOP	9	0	0	22	11	11	11	22	11	33	22
Others Statement	ORRN	311	46	16	67	19	55	14	69	38	90	54
	OTHERS	81	36	17	40	11	40	12	26	4	59	26
	SDFN	115	72	69	65	62	54	50	24	23	95	91
	SDIB	9	67	33	100	44	89	44	56	22	100	56
	SDIF	21	81	71	52	48	48	48	38	19	90	81
	SDLA	13	100	92	92	54	77	62	69	23	100	100
	SIIF	18	39	28	61	17	56	17	33	11	72	33
	SIRT	80	18	5	8	5	5	2	5	1	22	8
	SISA	43	56	30	60	19	60	16	26	5	84	42
	SISF	61	26	16	20	3	20	5	20	2	43	18
	SMOV	109	48	28	49	14	41	11	44	3	68	38
	SMVB	17	41	24	47	18	41	12	41	6	59	29
	SRIF	58	66	43	60	19	48	16	59	12	91	53
	STYP	165	38	19	48	14	41	12	24	2	58	29
Average			37	16	50	16	43	12	37	10	67	31