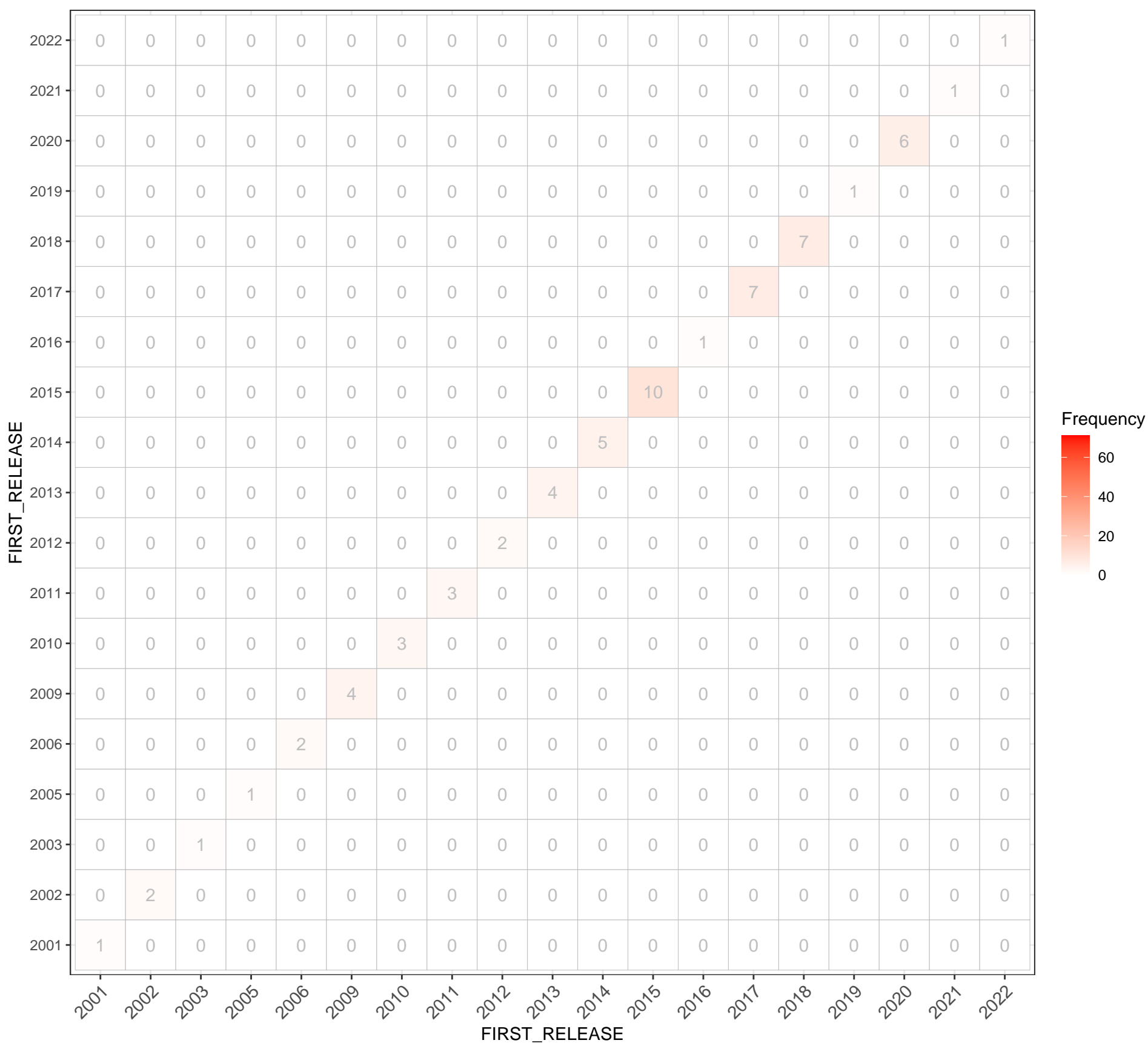


FIRST\_RELEASE\_\_\_\_\_FIRST\_RELEASE



OPEN\_SOURCE\_\_\_\_OPEN\_SOURCE

OPEN\_SOURCE

YES

0

53

NO

18

0

OPEN\_SOURCE

NO

YES

Frequency



60

40

20

0

TARGET\_\_\_\_TARGET

WEBSERVICES

0

2

16

MICROSERVICES

0

15

2

DISTRIBUTEDSYSTEMSINGENERAL

42

0

0

DISTRIBUTEDSYSTEMSINGENERAL

MICROSERVICES

WEBSERVICES

TARGET

Frequency



60

40

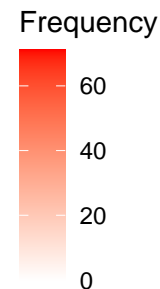
20

0

CODED\_DATA

CODED\_DATA\_\_\_\_\_CODED\_DATA

USERDEFINED	YAML	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2			
	XSLX	0	3	2	2	2	0	1	0	1	0	0	0	0	1	1	2	1	0	0	0	1	0	1	0	0	0	3	0		
	XML	0	3	0	2	0	0	0	0	4	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	0	5	0	1		
	USERDEFINED	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0		
	TXT	0	1	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0		
	STREAMS	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1		
	S3	0	1	0	1	0	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0	0	1	0	0		
	RTF	0	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0		
	RRD	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0		
	RAW	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	3	0	0	1	0	0	0	1	0	0		
NOTREPORTED	PROTOBUF	0	2	1	0	0	0	0	1	3	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	
	PPT	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0		
	PDF	0	5	1	6	2	0	0	0	3	0	0	0	0	0	1	1	6	1	0	1	0	1	1	0	0	0	2	2	0	
	ODT	0	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0		
	ODS	0	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0		
	NRQL	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NOTREPORTED	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	MQ	0	2	2	0	0	0	0	1	2	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
	MARKDOWN	MARKDOWN	0	1	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LOG	0	1	1	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JSON		1	20	7	3	0	0	2	1	49	3	1	2	0	0	0	0	3	0	3	1	1	0	2	1	2	1	4	1	2	
HTTP		0	1	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
HTML		0	2	2	0	0	0	2	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
H5		0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
DOC		0	2	1	2	2	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	1	0	0	0	0	0	0	2	0
DF		0	5	1	7	2	1	0	0	3	0	0	0	0	0	1	1	6	1	0	1	0	1	1	0	1	0	2	2	0	
DB		0	5	10	1	1	0	2	1	7	1	1	2	0	0	0	0	1	1	1	0	1	0	0	1	0	1	0	2	0	
CSV		0	26	5	5	2	0	2	1	20	1	1	2	0	0	1	1	5	1	2	1	1	1	1	1	1	1	3	3	1	
BIN	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	BIN	CSV	DB	DF	DOC	H5	HTML	HTTP	JSON	LOG	MARKDOWN	MQ	NOTREPORTED	NRQL	ODS	ODT	PDF	PPT	PROTOBUF	RAW	RRD	RTF	S3	STREAMS	TXT	USERDEFINED	XML	XSLX	YAML		



CODED\_DATA

CODED\_VISUALIZATION\_\_\_\_CODED\_VISUALIZATION

CODED\_VISUALIZATION

TABLES

48

44

53

DASHBOARDS

45

46

44

CHARTS

56

45

48

CHARTS

DASHBOARDS

TABLES

CODED\_VISUALIZATION

Frequency



60

40

20

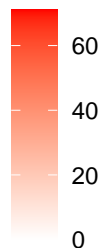
0

## CODED\_TECHNOLOGIES\_\_\_\_\_CODED\_TECHNOLOGIES

CODED\_TECHNOLOGIES

XML	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2	
TYPESCRIPT	0	0	0	3	0	0	0	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	0	
SWIFT	0	1	0	2	0	0	1	0	1	0	0	1	2	0	2	2	1	0	0	1	1	0	2	2	1	1	2	1	0	0	3	0	0
SHELL	0	0	0	2	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	1	1	1	0	0	0	0	0	2	0	0	0
SCALA	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
RUST	0	0	0	2	0	0	0	0	1	0	0	0	3	1	3	2	0	1	0	2	2	0	2	3	0	0	1	4	0	0	1	0	0
RUBY	0	1	1	7	0	0	1	1	1	0	0	1	6	0	8	5	1	0	0	3	6	0	5	6	1	1	10	1	0	0	2	1	0
REACT	0	1	0	3	0	0	1	0	0	0	0	1	2	0	3	3	1	0	0	0	1	0	1	1	1	3	1	0	0	0	1	1	0
RAILS	0	1	0	1	0	0	1	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0	1	1	1	1	1	0	0	0	1	0	0
PYTHON	1	1	0	16	1	0	1	0	1	0	1	1	10	1	15	8	1	1	1	5	8	3	10	22	1	1	6	3	0	1	2	1	2
PHP	0	1	0	12	1	0	1	0	1	0	0	1	8	1	11	7	1	1	1	5	6	2	13	10	1	1	5	2	0	1	2	0	1
PERL	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	4	2	3	0	0	0	0	0	1	0	0	1
NODEJS	0	1	0	6	1	0	1	1	0	0	1	1	6	1	8	4	1	1	0	4	10	1	6	8	1	1	6	2	0	0	1	0	0
NET	0	0	0	4	1	0	0	0	1	0	0	0	4	1	5	2	0	1	0	5	4	0	5	5	0	0	3	2	0	0	1	0	0
NAGIOS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0
LUA	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	1	0	1	1	0	0	0	1	0	0	0	0	0
LARAVEL	0	1	0	1	0	0	1	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0	1	1	1	1	1	0	0	0	1	0	0
JAVASCRIPT	0	1	1	20	0	0	1	0	1	0	0	1	8	1	20	20	1	1	0	2	4	0	7	8	1	3	5	2	0	1	2	1	0
JAVA	0	1	1	24	1	0	1	0	1	0	0	1	14	1	37	20	1	1	0	5	8	0	11	15	1	3	8	3	0	1	2	2	0
GOLANG	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	1	0	1	1	0	0	0	1	0	0	0	0	0
GO	0	1	0	11	0	0	1	0	1	0	0	1	26	1	14	8	1	1	0	4	6	0	8	10	1	2	6	3	0	1	2	1	0
FLASHK	0	1	0	1	0	0	1	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0	1	1	1	1	1	0	0	0	1	0	0
EXTJS	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0
ESCALA	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
ERLANG	0	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	1	0	0	1	1	0	0	1	1	0	0	1	0	0
ELIXIR	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
DJANGO	0	1	0	1	0	0	1	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0	1	1	1	1	1	0	0	0	1	0	0
CLOJURE	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CC	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0
C	1	1	1	40	1	1	1	0	1	1	0	1	11	1	24	20	1	1	1	4	6	3	12	16	1	3	7	2	2	2	2	3	2
ANGULARJS	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
ANDROID	0	1	0	1	0	0	1	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0	1	1	1	1	1	0	0	0	1	0	0
AJAX	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1

Frequency



CODED\_TECHNOLOGIES

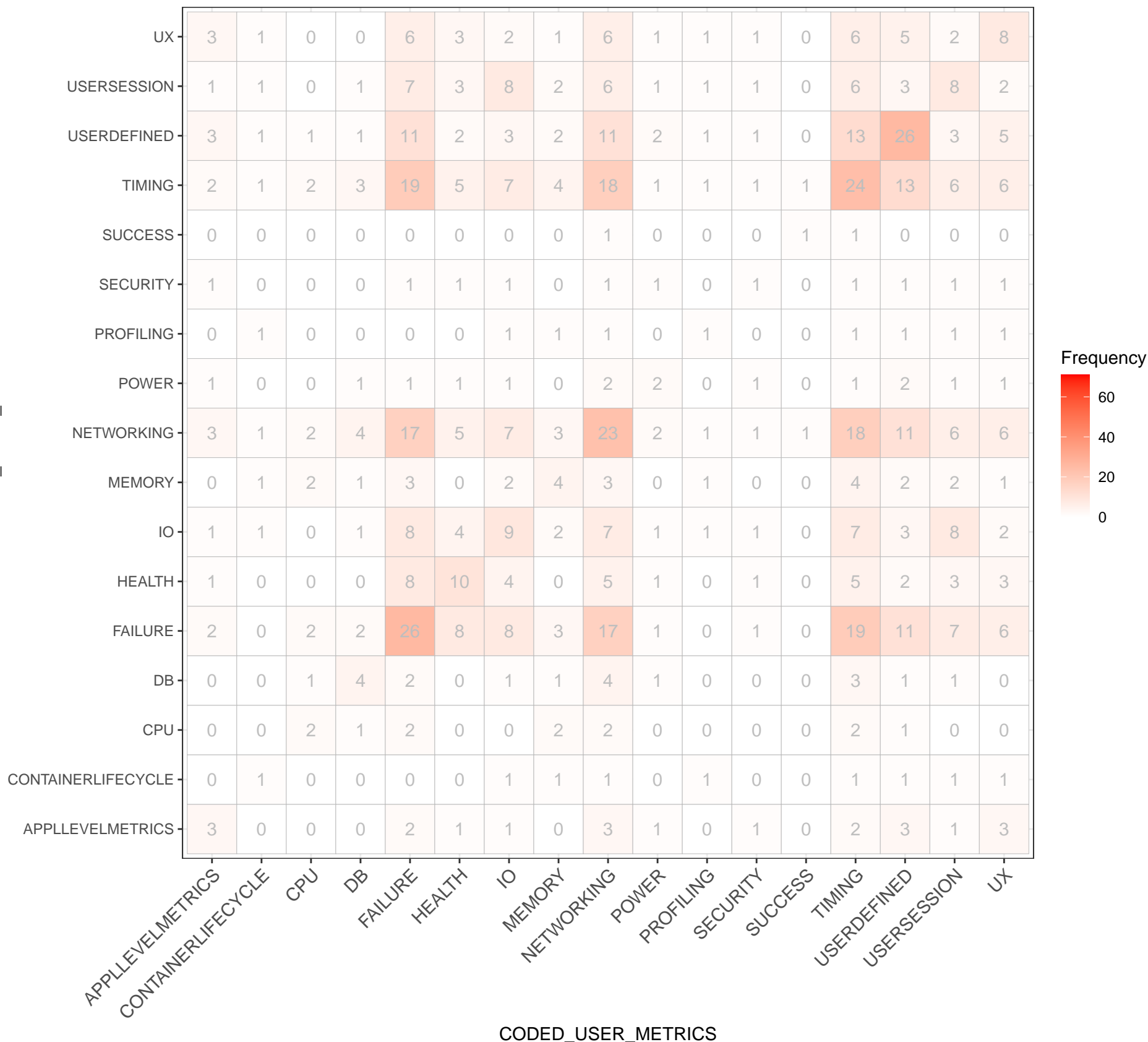






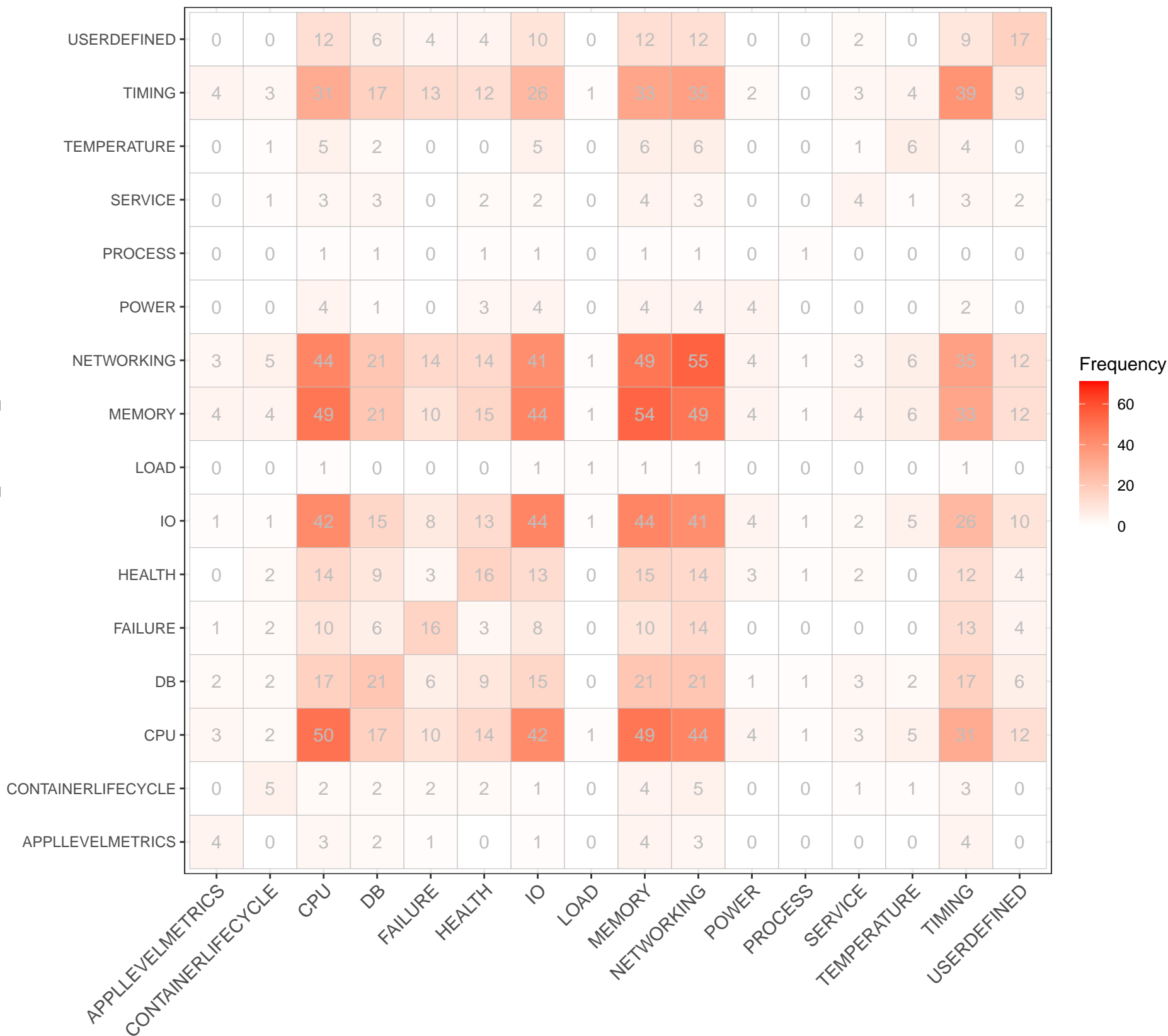
CODED\_USER\_METRICS

CODED\_USER\_METRICS\_\_\_\_\_CODED\_USER\_METRICS



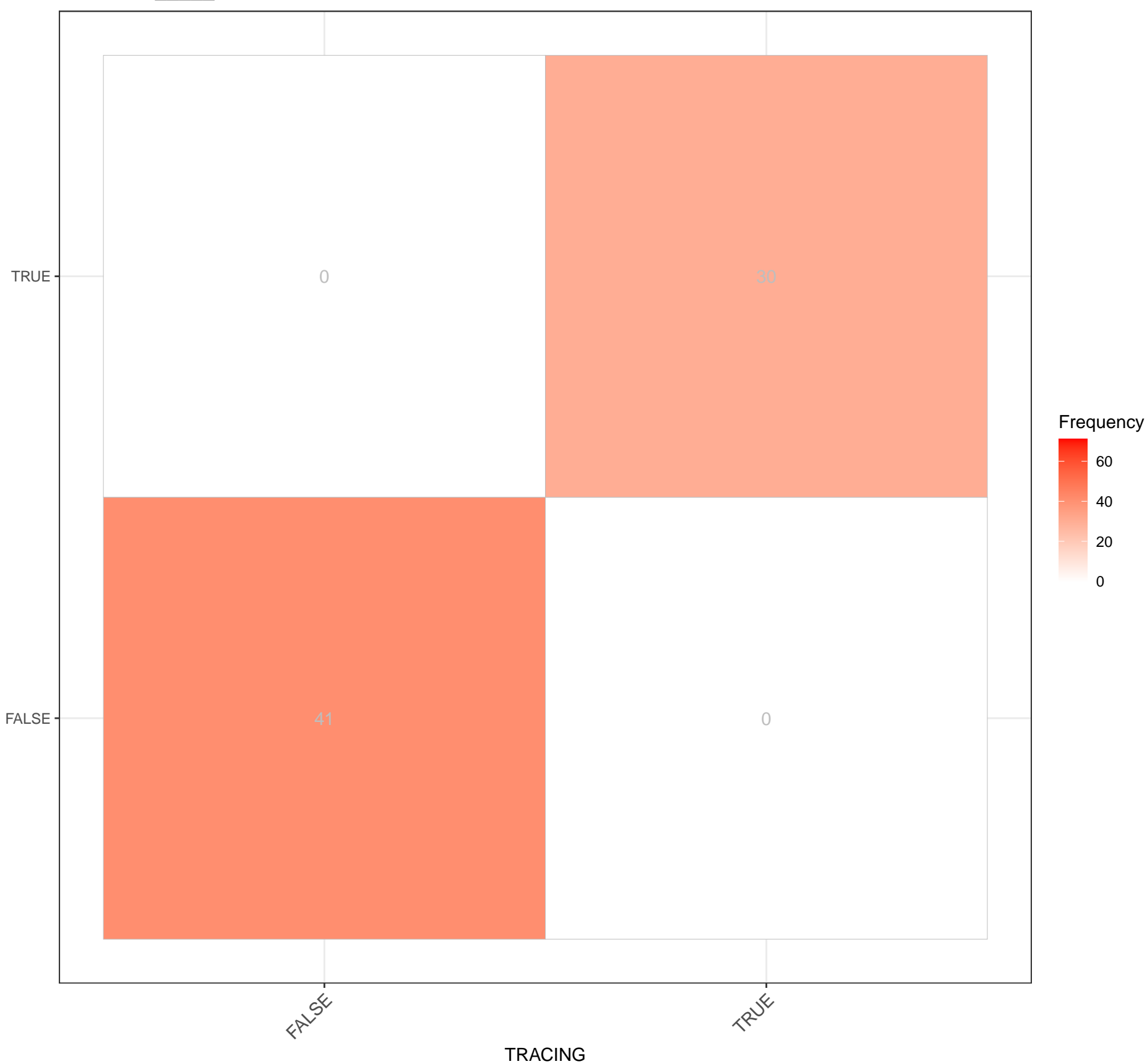
CODED\_SYSTEM\_METRICS

CODED\_SYSTEM\_METRICS\_\_\_\_\_CODED\_SYSTEM\_METRICS

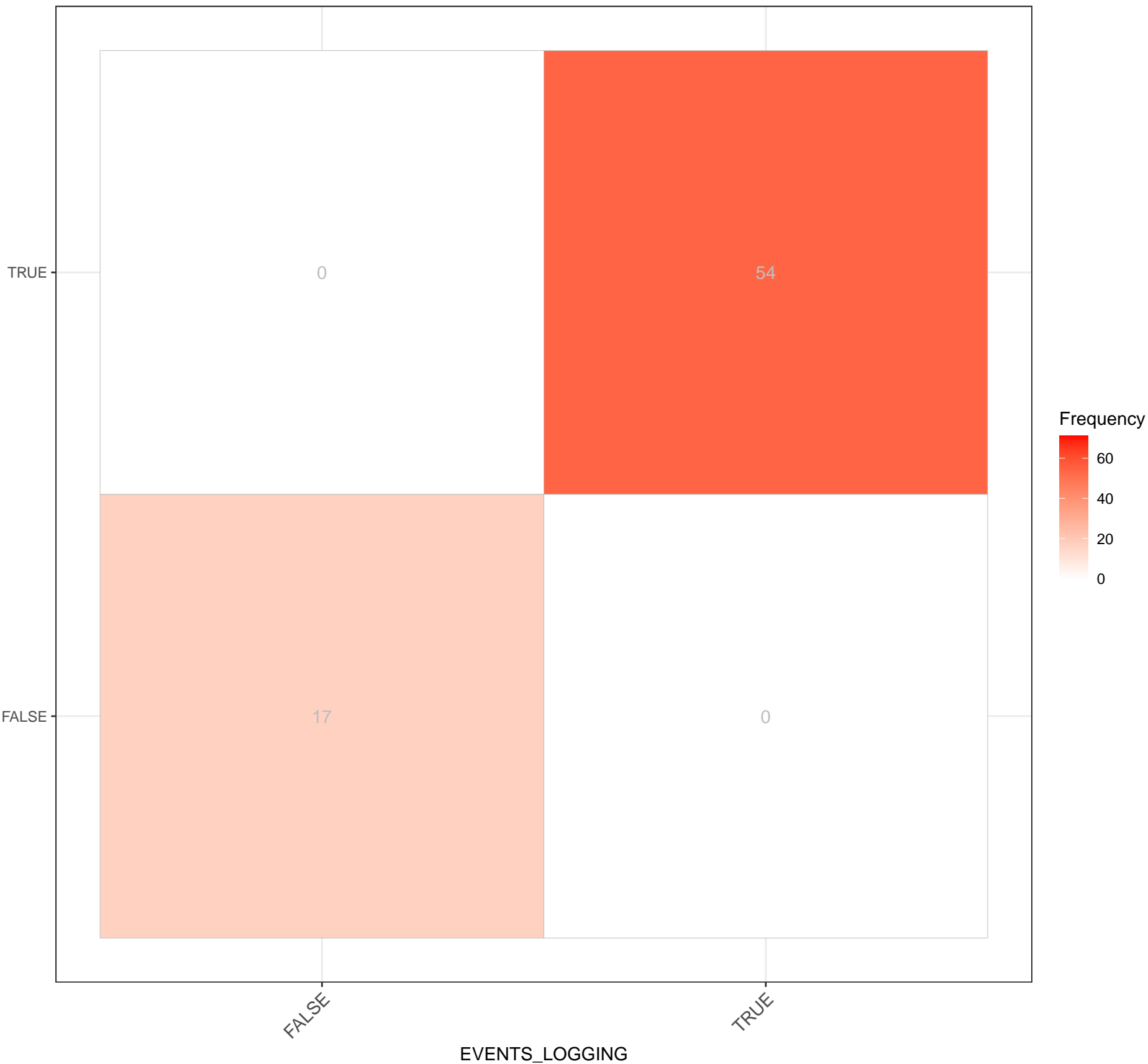


CODED\_SYSTEM\_METRICS

TRACING\_\_\_\_TRACING

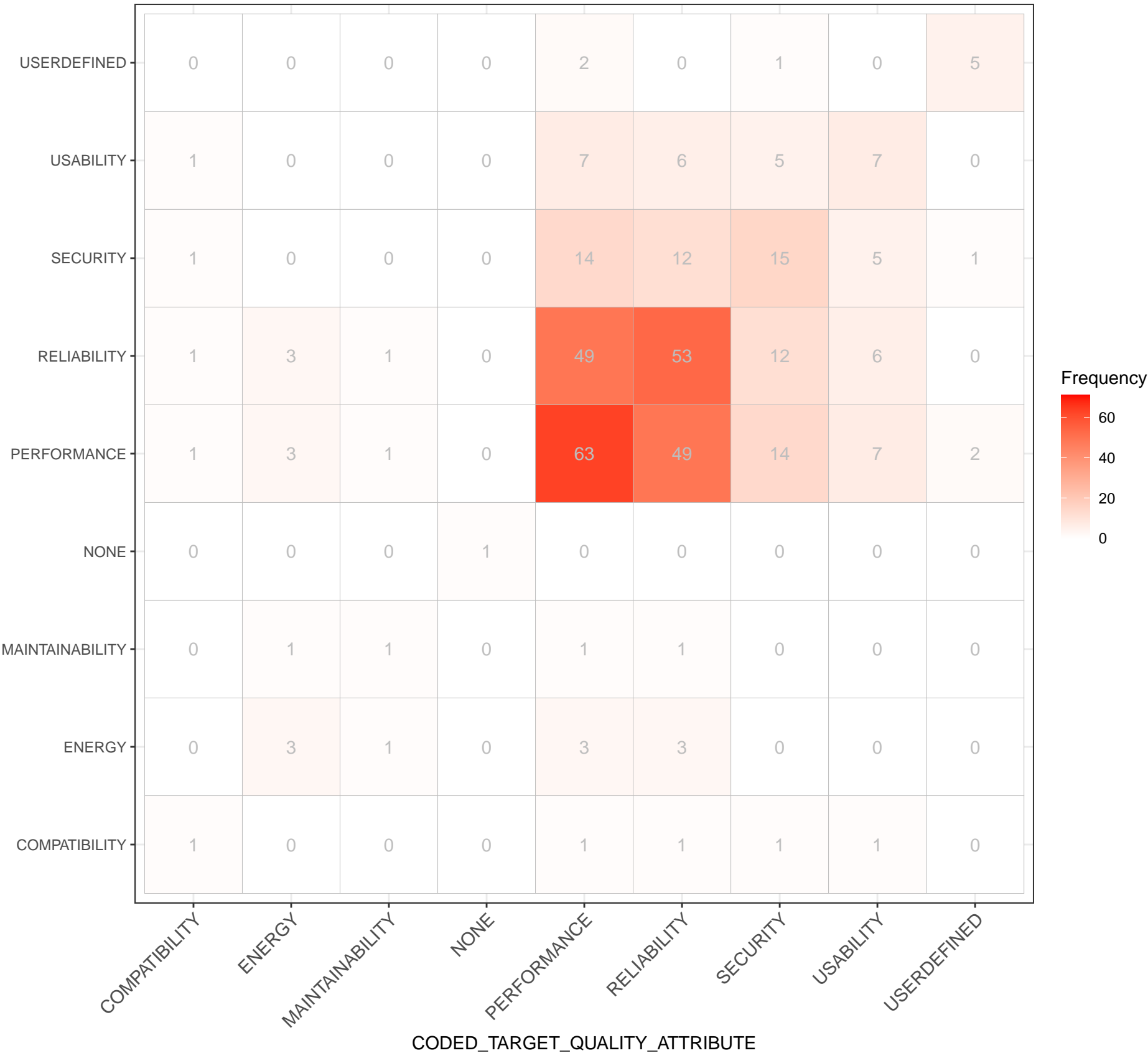


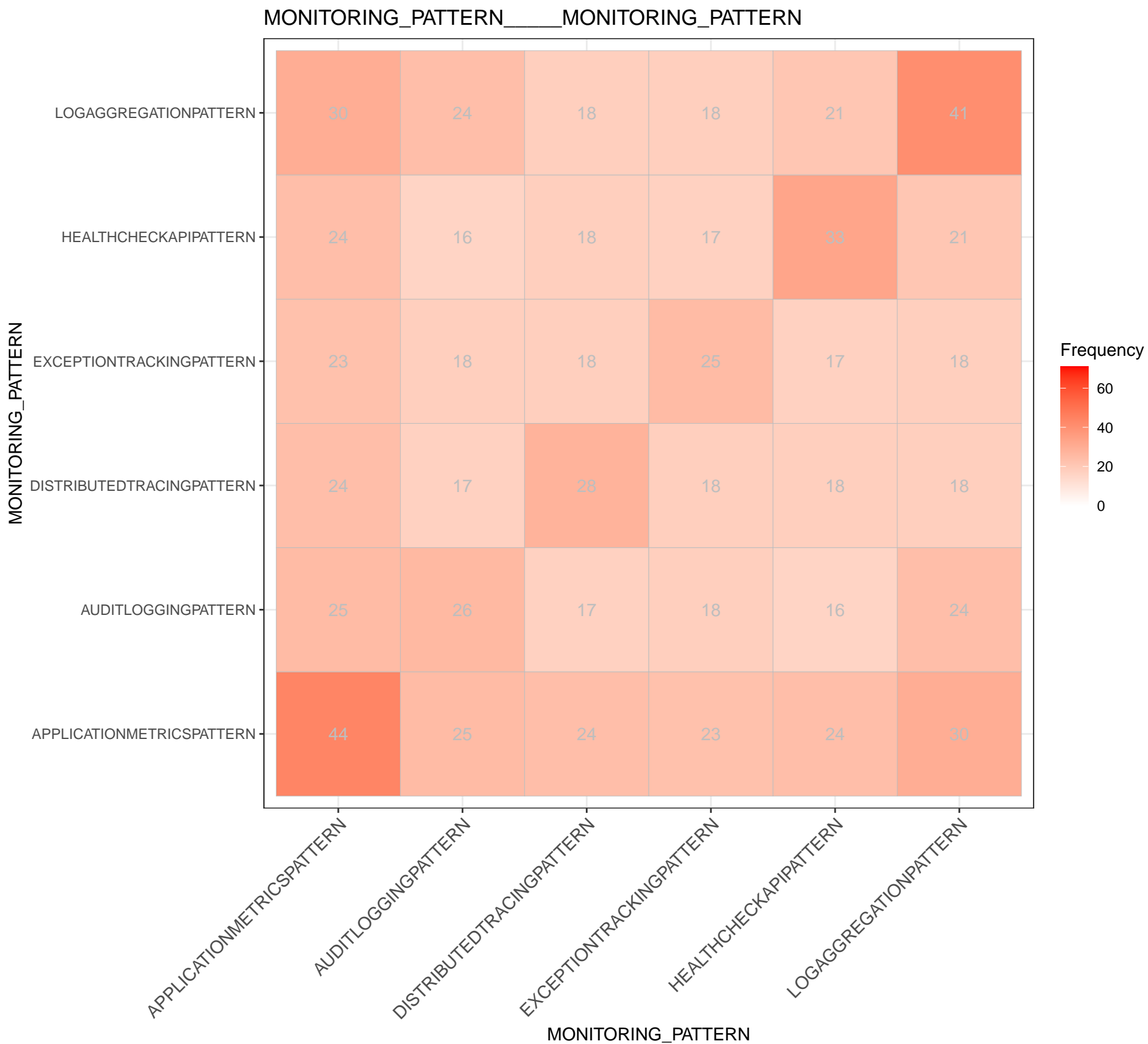
EVENTS\_LOGGING\_\_\_\_EVENTS\_LOGGING



CODED\_TARGET\_QUALITY\_ATTRIBUTE\_\_\_\_CODED\_TARGET\_QUALITY\_ATTRIBUTE

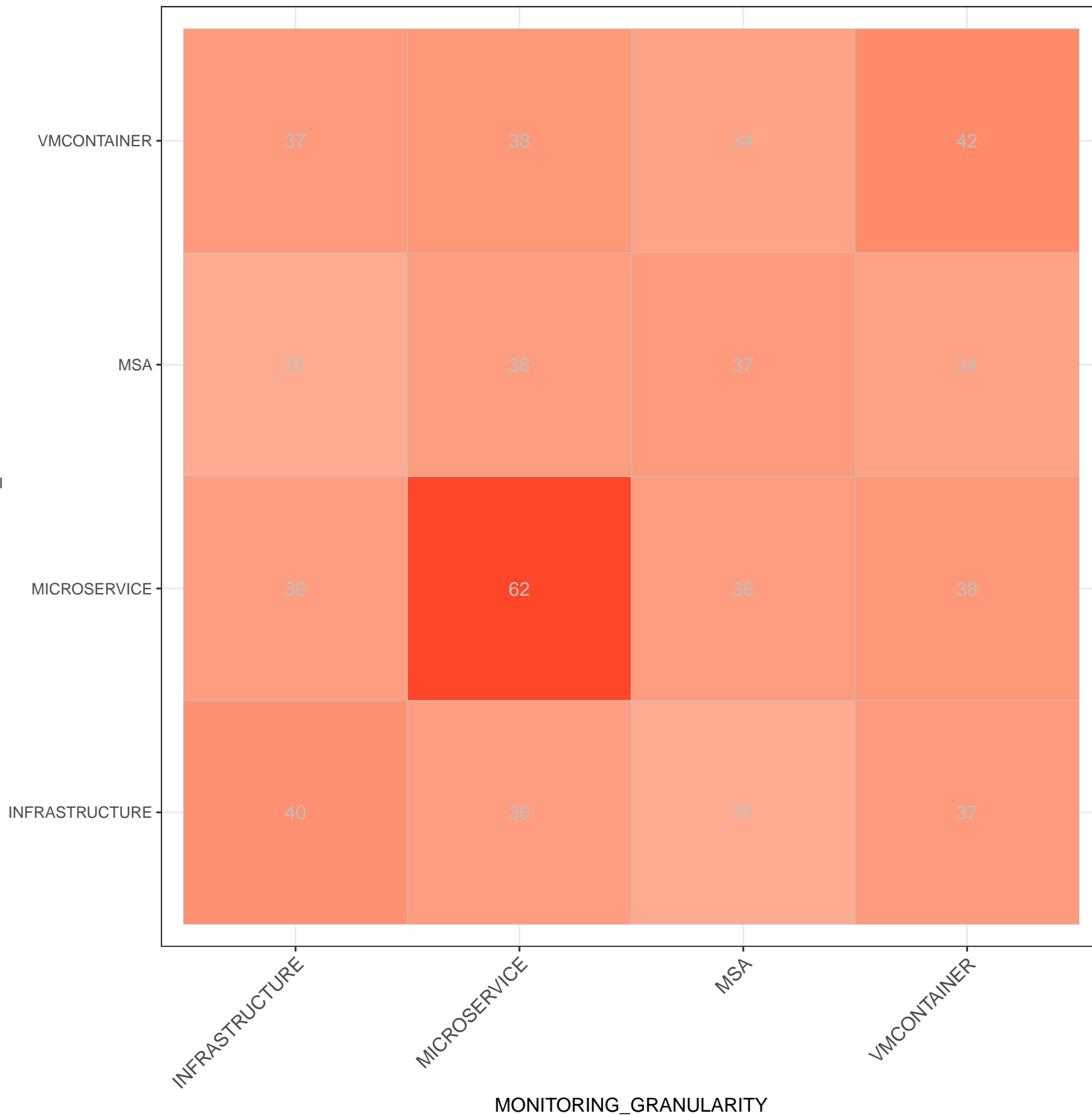
CODED\_TARGET\_QUALITY\_ATTRIBUTE





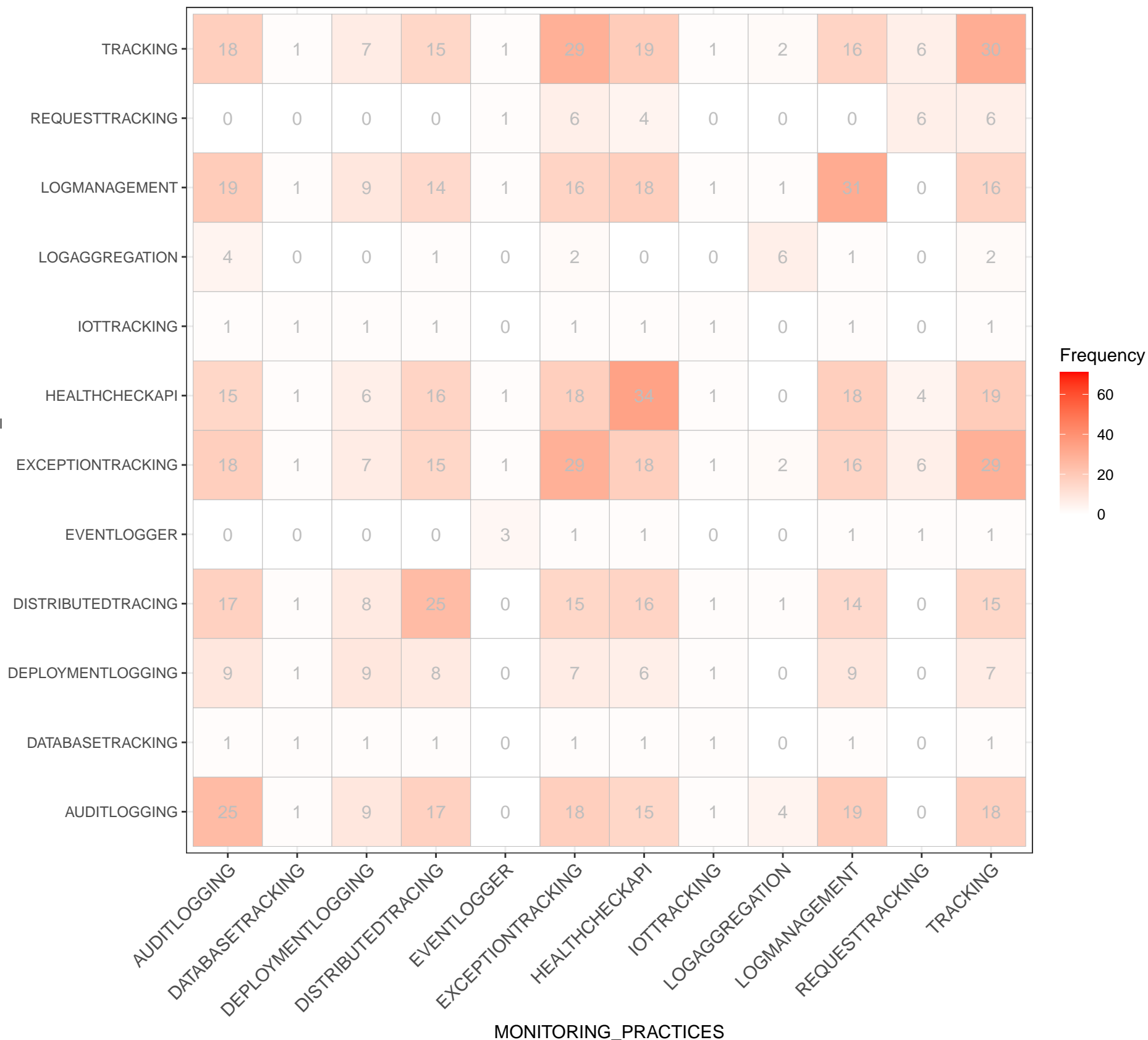
MONITORING\_GRANULARITY\_\_\_\_MONITORING\_GRANULARITY

MONITORING\_GRANULARITY



MONITORING\_PRACTICES

MONITORING\_PRACTICES\_\_\_\_\_MONITORING\_PRACTICES





INSTRUMENTATION\_\_\_\_INSTRUMENTATION

INSTRUMENTATION

VENDORPROVIDEDPLATFORM

VENDORPROVIDEDLIBRARY

THIRDPARTYPLATFORM

THIRDPARTYLIBRARY

THIRDPARTYLIBRARY

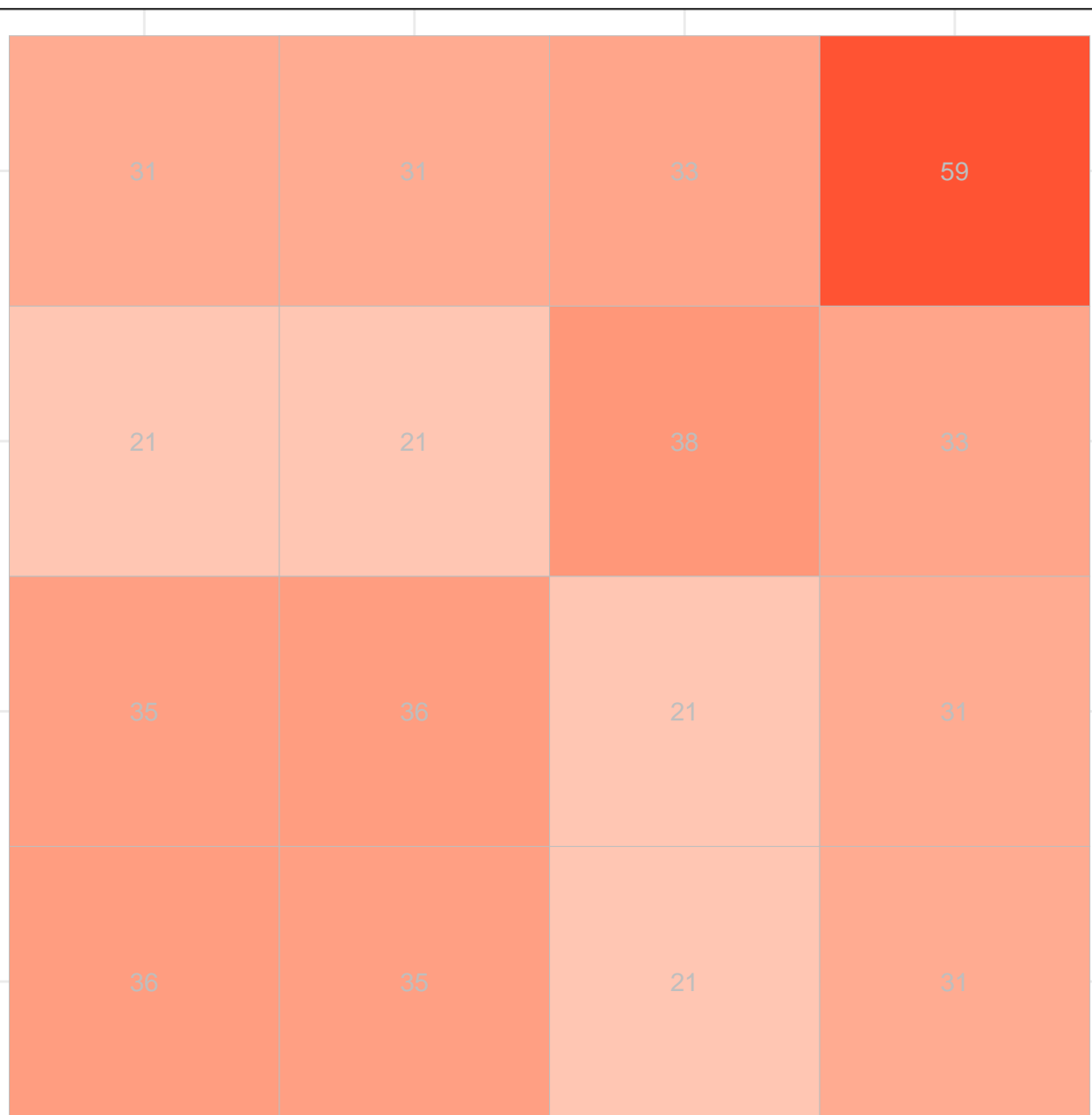
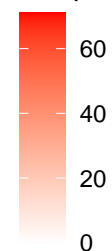
THIRDPARTYPLATFORM

VENDORPROVIDEDLIBRARY

VENDORPROVIDEDPLATFORM

INSTRUMENTATION

Frequency



CODED\_INTEGRATION\_WITH\_TESTING\_\_\_\_CODED\_INTEGRATION\_WITH\_TESTING

CODED\_INTEGRATION\_WITH\_TESTING

YES

0

12

NO

59

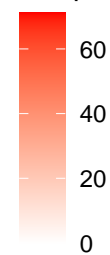
0

NO

YES

CODED\_INTEGRATION\_WITH\_TESTING

Frequency



ADDRESSED\_CHALLENGES\_\_\_\_ADDRESSED\_CHALLENGES

