

Table 1: Keywords extracted using TF-IDF

uni-gram	bi-gram	tri-gram
use	dangerous upgrade	break multiple file
test	test depend	build place file
package	upgrade modern	place file instead
upgrade	place file	code use test
file	break multiple	file wrong place
version	multiple file	package place file
need	rest api	place file wrong
like	file wrong	test let relocate
class	package place	use test let
dependency	wrong place	dependency longer need
remove	need make	like upgrade lose
place	code use	lose stuff dependency
old	let relocate	stuff dependency longer
add	test let	upgrade lose stuff
new	use test	backup test fully

Table 2: Keywords extracted using KeyBERT

uni-gram	bi-gram	tri-gram
move	use late	move client class
could	get rid	class client package
test	rest api	improvement class loading
version	year old	late library improvement
package	move client	library improvement class
dependency	client package	use late library
upgrade	class client	upgrade use late
class	next release	nice could upgrade
use	build mvc	could upgrade use
also	place file	rest client release
need	library improvement	current transport client
like	late library	level rest client
api	could upgrade	client instead new
build	class loading	high level rest
library	upgrade use	support basic authentication

Table 3: Keywords extracted using CS KeyBERT

uni-gram	bi-gram	tri-gram
move	specific dependency	independent indirect dependency
refactor	refactor code	need late version
remove	dependency need	outdated include exception
dependency	stuff dependency	dependency version need
couple	dependency specification	stuff dependency need
update	dependency good	specific dependency version
improve	dependency version	dependency good place
relocate	dependency exist	create cyclic dependency
transfer	upgrade dependency	old package depend
migrate	class refactor	indirect dependency exist
problem	remove dependency	package outdated include
increase	try depend	release year old
extend	cyclic dependency	turn package outdated
depend	need update	look dependency package
change	version need	hard work update