## Contents

```
library(knitr)
print(opts_chunk$get())
## $eval
## [1] TRUE
##
## $echo
## [1] TRUE
##
## $results
## [1] "markup"
##
## $tidy
## [1] FALSE
##
## $tidy.opts
## NULL
##
## $collapse
## [1] FALSE
##
## $prompt
## [1] FALSE
##
## $comment
## [1] "##"
##
## $highlight
## [1] TRUE
##
## $size
## [1] "normalsize"
##
## $background
## [1] "#F7F7F7"
## $strip.white
## [1] TRUE
##
## $cache
## [1] FALSE
## $cache.path
```

```
## [1] "cache/"
## $cache.vars
## NULL
##
## $cache.lazy
## [1] TRUE
## $dependson
## NULL
##
## $autodep
## [1] FALSE
##
## $cache.rebuild
## [1] FALSE
##
## $fig.keep
## [1] "high"
##
## $fig.show
## [1] "asis"
## $fig.align
## [1] "default"
##
## $fig.path
## [1] "figure/"
##
## $dev
## [1] "pdf"
##
## $dev.args
## NULL
##
## $dpi
## [1] 72
##
## $fig.ext
## NULL
##
## $fig.width
## [1] 7
##
## $fig.height
```

```
## [1] 7
## $fig.env
## [1] "figure"
## $fig.cap
## NULL
##
## $fig.scap
## NULL
##
## $fig.lp
## [1] "fig:"
##
## $fig.subcap
## NULL
##
## $fig.pos
## [1] ""
##
## $out.width
## [1] "\\maxwidth"
## $out.height
## NULL
##
## $out.extra
## NULL
##
## $fig.retina
## [1] 1
##
## $external
## [1] TRUE
##
## $sanitize
## [1] FALSE
## $interval
## [1] 1
##
## $aniopts
## [1] "controls,loop"
##
## $warning
```

```
## [1] TRUE
## $error
## [1] TRUE
##
## $message
## [1] TRUE
##
## $render
## NULL
##
## $ref.label
## NULL
##
## $child
## NULL
##
## $engine
## [1] "R"
##
## $split
## [1] FALSE
## $include
## [1] TRUE
##
## $purl
## [1] TRUE
library("data.table")
library("ggplot2")
df<-data.table(expand.grid(seq(10000,200000,1000),seq(10000,200000,2000),seq(100000,400000,
setnames(df,c("Var1","Var2","Var3"),c("ad","fm","value"))
df \leftarrow df [ad+fm \leftarrow value*.9&ad+fm >= value*.6]
df<-df[, 'P Value':=paste0(round(value/1000,2),"k")]</pre>
df<-df[, 'ad Amount':=paste0(round(ad/1000,2),"k")]</pre>
df<-df[,ratio:=(ad+fm)/value]</pre>
```

 $\#ggplot(df[value \%in\% seq(100000,400000,50000)\&fm==50000], aes(x=ratio,y=ad,group=value,color=geom_line())$