Defect Analysis

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library(readr)

## Warning: package 'readr' was built under R version 3.5.3

library(dplyr)

## Warning: package 'dplyr' was built under R version 3.5.3

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

library(ggrepel)

## Warning: package 'ggrepel' was built under R version 3.5.3

## Loading required package: ggplot2

## Warning: package 'ggplot2' was built under R version 3.5.3

library(ggplot2)  
library(tidyr)

## Warning: package 'tidyr' was built under R version 3.5.3

df <- read\_csv("sampleDefects.csv")

## Parsed with column specification:  
## cols(  
## .default = col\_character(),  
## MVP = col\_logical(),  
## RETEST\_STARTED\_DATE\_TIME = col\_logical(),  
## VENDOR = col\_logical(),  
## SEV = col\_logical(),  
## ISATTACHEDDOC = col\_logical(),  
## LASTCOMMENTSDATE = col\_logical()  
## )

## See spec(...) for full column specifications.

df

## # A tibble: 1,491 x 36  
## KEY PRIORITY MVP STATUS DEFECT\_STATUS CREATOR ISSUE\_SUMMARY REPORTER  
## <chr> <chr> <lgl> <chr> <chr> <chr> <chr> <chr>   
## 1 NGMS~ High NA Accep~ Closed Satya ~ PCO Delete s~ Satya S~  
## 2 NGNC~ Critical NA Accep~ Closed Santho~ Preprod: NG-~ Santhos~  
## 3 NGNC~ Medium NA Accep~ Closed Booma ~ CJ for Order~ Booma B~  
## 4 NGMS~ Critical NA Block~ Open Krishn~ "CI - CARE -~ Krishna~  
## 5 NGMS~ Medium NA Ready~ Closed Venka ~ URL={XM\_URL}~ Venka R~  
## 6 NGMS~ Critical NA Accep~ Closed Venka ~ XM Perf envi~ Venka R~  
## 7 NGMS~ High NA Won't~ Closed Srikar~ Prod & Prepr~ Srikar ~  
## 8 NGMB~ High NA Accep~ Closed Venka ~ Perf\_test: h~ Venka R~  
## 9 NGMB~ Critical NA Accep~ Closed Guhan ~ "source retu~ Guhan S~  
## 10 NGMB~ Medium NA Accep~ Closed Ganesh~ Remove downp~ Ganesh ~  
## # ... with 1,481 more rows, and 28 more variables: ASSIGNEE <chr>,  
## # ISSUE\_TYPE <chr>, PROJECT\_NAME <chr>, DEFECT\_CREATED\_DATE\_TIME <chr>,  
## # DEFECT\_RESOLUTION\_DATE <chr>, RESOLUTION <chr>, LABELS <chr>,  
## # TARGET\_ETA\_DATE\_TIME <chr>, RELEASE\_DATE <chr>,  
## # DEFECT\_UPDATED\_DATE\_TIME <chr>, STATUS\_CAT <chr>,  
## # RETEST\_STARTED\_DATE\_TIME <lgl>, DEFECT\_FIX\_VERSION <chr>, VENDOR <lgl>,  
## # SEV <lgl>, PROJECT <chr>, SPRINT <chr>, ENVIRONMENT <chr>, TEST\_TYPE <chr>,  
## # SCRUM\_TEAM <chr>, FUNTIONAL\_GROUP <chr>, AFFECTED\_VERSION <chr>,  
## # TEAMFLAG <chr>, SEARCHFIELDTKT <chr>, IMPACTS <chr>, ISATTACHEDDOC <lgl>,  
## # LASTCOMMENTSDATE <lgl>, TYPE <chr>

df <- df %>% separate(col=FUNTIONAL\_GROUP, into=c("channel","feature"), sep="\\-", remove=FALSE)

## Warning: Expected 2 pieces. Additional pieces discarded in 382 rows [3, 5, 6, 9,  
## 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 26, 31, 33, ...].

## Warning: Expected 2 pieces. Missing pieces filled with `NA` in 1 rows [632].

df

## # A tibble: 1,491 x 38  
## KEY PRIORITY MVP STATUS DEFECT\_STATUS CREATOR ISSUE\_SUMMARY REPORTER  
## <chr> <chr> <lgl> <chr> <chr> <chr> <chr> <chr>   
## 1 NGMS~ High NA Accep~ Closed Satya ~ PCO Delete s~ Satya S~  
## 2 NGNC~ Critical NA Accep~ Closed Santho~ Preprod: NG-~ Santhos~  
## 3 NGNC~ Medium NA Accep~ Closed Booma ~ CJ for Order~ Booma B~  
## 4 NGMS~ Critical NA Block~ Open Krishn~ "CI - CARE -~ Krishna~  
## 5 NGMS~ Medium NA Ready~ Closed Venka ~ URL={XM\_URL}~ Venka R~  
## 6 NGMS~ Critical NA Accep~ Closed Venka ~ XM Perf envi~ Venka R~  
## 7 NGMS~ High NA Won't~ Closed Srikar~ Prod & Prepr~ Srikar ~  
## 8 NGMB~ High NA Accep~ Closed Venka ~ Perf\_test: h~ Venka R~  
## 9 NGMB~ Critical NA Accep~ Closed Guhan ~ "source retu~ Guhan S~  
## 10 NGMB~ Medium NA Accep~ Closed Ganesh~ Remove downp~ Ganesh ~  
## # ... with 1,481 more rows, and 30 more variables: ASSIGNEE <chr>,  
## # ISSUE\_TYPE <chr>, PROJECT\_NAME <chr>, DEFECT\_CREATED\_DATE\_TIME <chr>,  
## # DEFECT\_RESOLUTION\_DATE <chr>, RESOLUTION <chr>, LABELS <chr>,  
## # TARGET\_ETA\_DATE\_TIME <chr>, RELEASE\_DATE <chr>,  
## # DEFECT\_UPDATED\_DATE\_TIME <chr>, STATUS\_CAT <chr>,  
## # RETEST\_STARTED\_DATE\_TIME <lgl>, DEFECT\_FIX\_VERSION <chr>, VENDOR <lgl>,  
## # SEV <lgl>, PROJECT <chr>, SPRINT <chr>, ENVIRONMENT <chr>, TEST\_TYPE <chr>,  
## # SCRUM\_TEAM <chr>, FUNTIONAL\_GROUP <chr>, channel <chr>, feature <chr>,  
## # AFFECTED\_VERSION <chr>, TEAMFLAG <chr>, SEARCHFIELDTKT <chr>,  
## # IMPACTS <chr>, ISATTACHEDDOC <lgl>, LASTCOMMENTSDATE <lgl>, TYPE <chr>

#df %>% filter(TYPE=="Jira" & DEFECT\_CREATED\_DATE\_TIME>"31-MAY-19") %>% group\_by(channel,feature) %>% ggplot(aes(feature,..count..)) + geom\_bar()

dat\_affected <- df %>% group\_by(AFFECTED\_VERSION, PRIORITY) %>% mutate(cnt=n()) %>% select(AFFECTED\_VERSION,PROJECT\_NAME,channel,feature, PRIORITY,cnt) %>% arrange(PROJECT\_NAME,PRIORITY)  
unique(dat\_affected)

## # A tibble: 609 x 6  
## # Groups: AFFECTED\_VERSION, PRIORITY [334]  
## AFFECTED\_VERSION PROJECT\_NAME channel feature PRIORITY cnt  
## <chr> <chr> <chr> <chr> <chr> <int>  
## 1 <NA> Amdocs-MCO <NA> <NA> Critical 333  
## 2 <NA> Amdocs ANM <NA> <NA> Critical 333  
## 3 <NA> Amdocs ANM <NA> <NA> High 202  
## 4 <NA> Amdocs ANM <NA> <NA> Low 62  
## 5 <NA> Amdocs ANM <NA> <NA> Medium 181  
## 6 <NA> Amdocs AR <NA> <NA> Critical 333  
## 7 <NA> Amdocs AR <NA> <NA> High 202  
## 8 <NA> Amdocs AR <NA> <NA> Low 62  
## 9 <NA> Amdocs AR <NA> <NA> Lowest 7  
## 10 <NA> Amdocs AR <NA> <NA> Medium 181  
## # ... with 599 more rows

dat\_channel\_feature <- df %>% group\_by(channel, feature, PRIORITY) %>% mutate(cnt=n()) %>% select(channel,feature, PRIORITY,cnt) %>% arrange(channel,feature,PRIORITY)  
unique(dat\_channel\_feature)

## # A tibble: 107 x 4  
## # Groups: channel, feature, PRIORITY [107]  
## channel feature PRIORITY cnt  
## <chr> <chr> <chr> <int>  
## 1 "Activation & Fulfillment " " Activate" Critical 19  
## 2 "Activation & Fulfillment " " Activate" High 21  
## 3 "Activation & Fulfillment " " Activate" Low 2  
## 4 "Activation & Fulfillment " " Activate" Lowest 1  
## 5 "Activation & Fulfillment " " Activate" Medium 19  
## 6 "Activation & Fulfillment " " Logistics" High 2  
## 7 "Activation & Fulfillment " " Logistics" Medium 2  
## 8 "Activation & Fulfillment " " Voicemail" Critical 2  
## 9 "Agent Care " " Activation" Critical 2  
## 10 "Agent Care " " Activation" Low 1  
## # ... with 97 more rows

dat\_fixed\_env <- df %>% group\_by(DEFECT\_FIX\_VERSION, PRIORITY,ENVIRONMENT) %>% mutate(cnt=n()) %>% select(DEFECT\_FIX\_VERSION,PROJECT\_NAME,channel,feature,ENVIRONMENT, PRIORITY,cnt) %>% arrange(PROJECT\_NAME,ENVIRONMENT,PRIORITY)  
unique(dat\_fixed\_env)

## # A tibble: 574 x 7  
## # Groups: DEFECT\_FIX\_VERSION, PRIORITY, ENVIRONMENT [182]  
## DEFECT\_FIX\_VERSION PROJECT\_NAME channel feature ENVIRONMENT PRIORITY cnt  
## <chr> <chr> <chr> <chr> <chr> <chr> <int>  
## 1 <NA> Amdocs-MCO <NA> <NA> ML-INT Critical 239  
## 2 <NA> Amdocs ANM <NA> <NA> DINT Medium 23  
## 3 <NA> Amdocs ANM <NA> <NA> ML-INT Critical 239  
## 4 <NA> Amdocs ANM <NA> <NA> ML-INT High 114  
## 5 <NA> Amdocs ANM <NA> <NA> ML-INT Low 54  
## 6 <NA> Amdocs ANM <NA> <NA> ML-INT Medium 122  
## 7 <NA> Amdocs AR <NA> <NA> DINT Critical 43  
## 8 <NA> Amdocs AR <NA> <NA> DINT High 38  
## 9 <NA> Amdocs AR <NA> <NA> DINT Lowest 2  
## 10 <NA> Amdocs AR <NA> <NA> DINT Medium 23  
## # ... with 564 more rows

dat\_env <- df %>% group\_by(PRIORITY,ENVIRONMENT) %>% mutate(cnt=n()) %>% select(PROJECT\_NAME,channel,feature,ENVIRONMENT, PRIORITY,cnt) %>% arrange(PROJECT\_NAME,ENVIRONMENT,PRIORITY)  
unique(dat\_env)

## # A tibble: 423 x 6  
## # Groups: PRIORITY, ENVIRONMENT [31]  
## PROJECT\_NAME channel feature ENVIRONMENT PRIORITY cnt  
## <chr> <chr> <chr> <chr> <chr> <int>  
## 1 Amdocs-MCO <NA> <NA> ML-INT Critical 239  
## 2 Amdocs ANM <NA> <NA> DINT Medium 23  
## 3 Amdocs ANM <NA> <NA> ML-INT Critical 239  
## 4 Amdocs ANM <NA> <NA> ML-INT High 114  
## 5 Amdocs ANM <NA> <NA> ML-INT Low 54  
## 6 Amdocs ANM <NA> <NA> ML-INT Medium 122  
## 7 Amdocs AR <NA> <NA> DINT Critical 43  
## 8 Amdocs AR <NA> <NA> DINT High 38  
## 9 Amdocs AR <NA> <NA> DINT Lowest 2  
## 10 Amdocs AR <NA> <NA> DINT Medium 23  
## # ... with 413 more rows

dat\_all <- df %>% group\_by(DEFECT\_FIX\_VERSION,channel,feature,PRIORITY,ENVIRONMENT) %>% mutate(cnt=n()) %>% select(DEFECT\_FIX\_VERSION,channel,feature,PRIORITY,ENVIRONMENT,cnt) %>% arrange(channel,feature,PRIORITY,ENVIRONMENT)  
unique(dat\_all)

## # A tibble: 299 x 6  
## # Groups: DEFECT\_FIX\_VERSION, channel, feature, PRIORITY, ENVIRONMENT [299]  
## DEFECT\_FIX\_VERSION channel feature PRIORITY ENVIRONMENT cnt  
## <chr> <chr> <chr> <chr> <chr> <int>  
## 1 NGAX-R19.15.1 "Activation & Fulfil~ " Activa~ Critical Pre-Prod 1  
## 2 Unknown "Activation & Fulfil~ " Activa~ Critical Pre-Prod 12  
## 3 NGAPI-R19.15.0 "Activation & Fulfil~ " Activa~ Critical Pre-Prod 1  
## 4 NGAX-R19.7.8 "Activation & Fulfil~ " Activa~ Critical Pre-Prod 1  
## 5 NGAX-R19.7.7 "Activation & Fulfil~ " Activa~ Critical Pre-Prod 1  
## 6 NGAPI-R19.13.6 "Activation & Fulfil~ " Activa~ Critical Pre-Prod 1  
## 7 NGAPI-R19.15.5 "Activation & Fulfil~ " Activa~ Critical Pre-Prod 1  
## 8 NGAPI-R19.10.0 "Activation & Fulfil~ " Activa~ Critical Pre-Prod 1  
## 9 <NA> "Activation & Fulfil~ " Activa~ High Pre-Prod 1  
## 10 Unknown "Activation & Fulfil~ " Activa~ High Pre-Prod 11  
## # ... with 289 more rows