UEFA Women's Euro, 2022

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```
library(tidyverse)
library(StatsBombR)

Comp <- FreeCompetitions() %>%
filter(competition_id==53 & season_name=="2022")

matches <- FreeMatches(Competitions = Comp)
matches

StatsBombData <- free_allevents(MatchesDF = matches, Parallel = T)
StatsBombData = allclean(StatsBombData)

#Goals and Shots (Team and Player) - Table
shots_goals = StatsBombData %>%
  group_by(team.name) %>%
  summarise(shots = sum(type.name=="Shot", na.rm = TRUE),
  goals = sum(shot.outcome.name=="Goal", na.rm = TRUE))

shots_goals_player = StatsBombData %>%
  group_by(player.name) %>%
  summarise(shots = sum(type.name=="Shot", na.rm = TRUE),
  goals = sum(shot.outcome.name=="Goal", na.rm = TRUE))

shots_goals_per_game = StatsBombData %>%
  group_by(team.name) %>%
  summarise(shots = sum(type.name=="Shot", na.rm = TRUE)/n_distinct(match_id),
  goals = sum(shot.outcome.name=="Goal", na.rm = TRUE)/n_distinct(match_id))

shots_goals_player_per_game_ = StatsBombData %>%
  group_by(player.name) %>%
  summarise(shots = sum(type.name=="Shot", na.rm = TRUE)/n_distinct(match_id),
  goals = sum(shot.outcome.name=="Goal", na.rm = TRUE)/n_distinct(match_id))

#Goals and Shots (Team) - Chart
library(ggplot2)

ggplot(data = shots_goals,
  aes(x = reorder(team.name, shots), y = shots, fill=shots)) +
  geom_bar(stat = "identity", width = 0.5) +
  scale_fill_gradient(low="#9a9898", high="#e20c16") +
  geom_text(aes(label=shots), color="white", hjust=1.3, size=3) +
  labs(y="Shots") +
  theme_minimal()+
  theme(axis.title.y = element_blank(),
        plot.background = element_rect(fill='white', color='white'),
        panel.background = element_rect(fill='white', color='white'),
        panel.grid=element_line(color="white"),
        text = element_text(color='black'),
        axis.text.x=element_text(colour='black'),
        axis.text.y=element_text(colour='black'),
        legend.position="none",
        ) +
  scale_y_continuous(expand = c(0,0)) +
  coord_flip()
```

```
ggplot(data = shots_goals,
       aes(x = reorder(team.name, goals), y = goals, fill=goals)) +
  geom_bar(stat = "identity", width = 0.5) +
  scale_fill_gradient(low="#9a9898", high="#e20c16") +
  geom_text(aes(label=goals), color="white", hjust=1.3, size=3) +
  labs(y="Goals") +
  theme_minimal()+
  theme(axis.title.y = element_blank(),
        plot.background = element_rect(fill='white', color='white'),
        panel.background = element_rect(fill='white', color='white'),
        panel.grid=element_line(color="white"),
        text = element_text(color='black'),
        axis.text.x=element_text(colour='black'),
        axis.text.y=element_text(colour='black'),
        legend.position="none",
  ) +
  scale_y_continuous(expand = c(0,0)) +
  coord_flip()
```

```
#Goals and Shots per game (Team) - Chart
ggplot(data = shots_goals_per_game,
       aes(x = reorder(team.name, shots), y = shots, fill=shots)) +
  geom_bar(stat = "identity", width = 0.5) +
  scale_fill_gradient(low="#9a9898", high="#e20c16") +
  geom_text(aes(label=round(shots,digits=2)), color="white", hjust=1.3, size=3) +
  labs(y="Shots per game") +
  theme_minimal()+
  theme(axis.title.y = element_blank(),
        plot.background = element_rect(fill='white', color='white'),
        panel.background = element_rect(fill='white', color='white'),
        panel.grid=element_line(color="white"),
        text = element_text(color='black'),
        axis.text.x=element_text(colour='black'),
        axis.text.y=element_text(colour='black'),
        legend.position="none",
  ) +
  scale_y_continuous(expand = c(0,0)) +
  coord_flip()
```

```
ggplot(data = shots_goals_per_game,
       aes(x = reorder(team.name, goals), y = goals, fill=goals)) +
  geom_bar(stat = "identity", width = 0.5) +
  scale_fill_gradient(low="#9a9898", high="#e20c16") +
  geom_text(aes(label=round(goals,digits=2)), color="white", hjust=1.3, size=3) +
  labs(y="Goals per game") +
  theme_minimal()+
  theme(axis.title.y = element_blank(),
        plot.background = element_rect(fill='white', color='white'),
        panel.background = element_rect(fill='white', color='white'),
        panel.grid=element_line(color="white"),
        text = element_text(color='black'),
        axis.text.x=element_text(colour='black'),
        axis.text.y=element_text(colour='black'),
        legend.position="none",
  ) +
  scale_y_continuous(expand = c(0,0)) +
  coord_flip()
```

```
#Player Shots Per 90 - Table
player_shots = StatsBombData %>%
  group_by(player.name, player.id) %>%
  summarise(shots = sum(type.name=="Shot", na.rm = TRUE))

player_minutes = get.minutesplayed(StatsBombData)

player_minutes = player_minutes %>% group_by(player.id) %>%
  summarise(minutes = sum(MinutesPlayed))

player_shots = left_join(player_shots, player_minutes)

player_shots = player_shots %>% mutate(nineties = minutes/90)

player_shots = player_shots %>% mutate(shots_per90 = shots/nineties)

#Plotting Passes - Chart
library(SBpitch)

passes = StatsBombData %>%
  filter(type.name=="Pass" & is.na(pass.outcome.name) &
           player.id==15619) %>%
  filter(pass.end_location.x>=102 & pass.end_location.y<=62 &
           pass.end_location.y>=18)

create_Pitch(grass_colour = "white", line_colour = "#000000",
             background_colour = "white", goal_colour = "#000000",
             goaltype = "line", middlethird = FALSE, BasicFeatures = FALSE,
             JdeP = FALSE, padding = 5) +
  geom_segment(data = passes, aes(x = location.x, y = location.y, xend = pass.end_location.x, yend = pass.end_loc
ation.y),
      lineend = "round", size = 0.5, colour = "#e20c16", arrow = arrow(length = unit(0.07, "inches"), ends = "las
t", type = "open")) +
      scale_y_reverse() +
      coord_fixed(ratio = 105/100)
```

```
passes1 = StatsBombData %>%
  filter(type.name=="Pass" & is.na(pass.outcome.name) &
           player.id==15178) %>%
  filter(pass.end_location.x>=102 & pass.end_location.y<=62 &
           pass.end_location.y>=18)

create_Pitch(grass_colour = "white", line_colour = "#000000",
             background_colour = "white", goal_colour = "#000000",
             goaltype = "line", middlethird = FALSE, BasicFeatures = FALSE,
             JdeP = FALSE, padding = 5) +
  geom_segment(data = passes1, aes(x = location.x, y = location.y, xend = pass.end_location.x, yend = pass.end_lo
cation.y),
  lineend = "round", size = 0.5, colour = "#ffd900", arrow = arrow(length = unit(0.07, "inches"), ends = "last",
type = "open")) +
  scale_y_reverse() + coord_fixed(ratio = 105/100)
```

```
#Heat Maps - Final
library(tidyverse)
library(grid)
library(sysfonts)

defensiveactivitycolors <-rev(c("#ffd900", "#ffdf4c", "#ffe574","#ffeb98","#fff2bb", "#fff8dd", "#ffdfd4","#ffbfa
a","#ff9e81","#ff7b5a","#ff5232", "#DC2608", "#BF0000", "#7F0000", "#5F0000"))
Final_match <- matches %>%
  filter(competition_stage.id==26)

StatsBombData_final <- free_allevents(MatchesDF = Final_match, Parallel = T)
StatsBombDataEngGer <- allclean(StatsBombData_final)

heatmapEngGer = StatsBombDataEngGer %>%mutate(location.x = ifelse(location.x>120, 120, location.x),
                 location.y = ifelse(location.y>80, 80, location.y),
                 location.x = ifelse(location.x<0, 0, location.x),
                 location.y = ifelse(location.y<0, 0, location.y))

heatmapEngGer$xbin <- cut(heatmapEngGer$location.x, breaks = seq(from=0, to=120, by = 20),include.lowest=TRUE )
heatmapEngGer$ybin <- cut(heatmapEngGer$location.y, breaks = seq(from=0, to=80, by = 20),include.lowest=TRUE)


heatmapEngGer = heatmapEngGer%>%
  filter(type.name=="Pressure" | duel.type.name=="Tackle" |
         type.name=="Foul Committed" |
         type.name=="Interception" |
         type.name=="Block" ) %>%
  group_by(team.name) %>%
  mutate(total_DA = n()) %>%
  group_by(team.name, xbin, ybin) %>%
  summarise(total_DA = max(total_DA),
            bin_DA = n(),
            bin_pct = bin_DA/total_DA,
            location.x = median(location.x),
            location.y = median(location.y)) %>%
  group_by(xbin, ybin) %>%
  mutate(league_ave = mean(bin_pct)) %>% group_by(team.name, xbin, ybin) %>%
  mutate(diff_vs_ave = bin_pct - league_ave)


ggplot(data= heatmapEngGer, aes(x = location.x, y = location.y, fill = diff_vs_ave, group =diff_vs_ave)) +
  geom_bin2d(binwidth = c(20, 20), position = "identity", alpha = 0.9) +
  annotate("rect",xmin = 0, xmax = 120, ymin = 0, ymax = 80, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = 60, ymin = 0, ymax = 80, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 18, xmax = 0, ymin = 18, ymax = 62, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 102, xmax = 120, ymin = 18, ymax = 62, fill = NA, colour ="black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = 6, ymin = 30, ymax = 50, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 120, xmax = 114, ymin = 30, ymax = 50, fill = NA, colour ="black", size = 0.6) +
  annotate("rect",xmin = 120, xmax = 120.5, ymin =36, ymax = 44, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = -0.5, ymin =36, ymax = 44, fill = NA, colour = "black", size = 0.6) +
  annotate("segment", x = 60, xend = 60, y = -0.5, yend = 80.5, colour ="black", size = 0.6) +
  annotate("segment", x = 0, xend = 0, y = 0, yend = 80, colour = "black", size = 0.6)+
  annotate("segment", x = 120, xend = 120, y = 0, yend = 80, colour = "black", size = 0.6)+
  theme(rect = element_blank(),
        line = element_blank()) +
  annotate("point", x = 12 , y = 40, colour = "black", size = 1.05) +
  annotate("point", x = 108 , y = 40, colour = "black", size = 1.05) +
  annotate("path", colour = "black", size = 0.6, x=60+10*cos(seq(0,2*pi,length.out=2000)),  y=40+10*sin(seq(0,2*p
i,length.out=2000)))+
  annotate("point", x = 60 , y = 40, colour = "black", size = 1.05) +
  annotate("path", x=12+10*cos(seq(-0.3*pi,0.3*pi,length.out=30)), size = 0.6, y=40+10*sin(seq(-0.3*pi,0.3*pi,len
gth.out=30)), col="black") +
  annotate("path", x=108-10*cos(seq(-0.3*pi,0.3*pi,length.out=30)), size = 0.6, y=40-10*sin(seq(-0.3*pi,0.3*pi,le
ngth.out=30)), col="black") +
  theme(axis.text.x=element_blank(),
        axis.title.x = element_blank(),
        axis.title.y = element_blank(),
        plot.caption=element_text(size=13,family="sans", hjust=0.5, vjust=0.5, colour="black"), plot.subtitle = e
lement_text(size = 15, family="sans", hjust = 0.5, colour="black"), axis.text.y=element_blank(),
        legend.title = element_blank(), legend.text=element_text(size=15,family="geneva", colour="black"),
        legend.key.size = unit(1.5, "cm"),
        plot.title = element_text(margin = margin(r = 10, b = 10), face="bold",size = 30, family="sans", colour =
"black", hjust = 0.5),
        legend.direction = "vertical",
        axis.ticks=element_blank(),
        plot.margin = margin(2, 2, 2, 2, "cm"),
        plot.background = element_rect(fill = "white", color="white"),
        panel.background = element_rect(fill='white', color='white'),
        strip.text.x = element_text(size=13,family="sans",colour="black")) +
  scale_y_reverse() +
  scale_fill_gradientn(colours = defensiveactivitycolors, trans = "reverse", labels = scales::percent_format(accu
racy = 1), limits = c(0.03, -0.03)) +
  labs(title = "Defensive Heat Map", subtitle = "UEFA Women's Euro Final, 2022") +
  coord_fixed(ratio = 95/100) +
  annotation_custom(grob = linesGrob(arrow=arrow(type="open", ends="last", length=unit(2.55,"mm")), gp=gpar(col="
black", fill=NA, lwd=2.2)), xmin=25, xmax = 95, ymin = -83, ymax = -83) +
  facet_wrap(~team.name) +
  guides(fill=guide_legend(reverse=TRUE))
```

```
#Shot Maps - Player - Bethany Mead
shots = StatsBombData %>%
  filter(type.name=="Shot" & (shot.type.name!="Penalty" | is.na(shot.type.name)) & player.name=="Bethany Mead")
shotmapxgcolors <- c("#ffd900", "#ffdf4c", "#ffe574","#ffeb98","#fff2bb", "#fff8dd", "#ffdfd4","#ffbfaa","#ff9e8
1","#ff7b5a","#ff5232", "#DC2608", "#BF0000", "#7F0000", "#5F0000")

ggplot() +
  annotate("rect",xmin = 0, xmax = 120, ymin = 0, ymax = 80, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = 60, ymin = 0, ymax = 80, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 18, xmax = 0, ymin = 18, ymax = 62, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 102, xmax = 120, ymin = 18, ymax = 62, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = 6, ymin = 30, ymax = 50, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 120, xmax = 114, ymin = 30, ymax = 50, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 120, xmax = 120.5, ymin =36, ymax = 44, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = -0.5, ymin =36, ymax = 44, fill = NA, colour = "black", size = 0.6) +
  annotate("segment", x = 60, xend = 60, y = -0.5, yend = 80.5, colour = "black", size = 0.6)+
  annotate("segment", x = 0, xend = 0, y = 0, yend = 80, colour = "black", size = 0.6)+
  annotate("segment", x = 120, xend = 120, y = 0, yend = 80, colour = "black", size = 0.6)+
  theme(rect = element_blank(),
   line = element_blank()) +
  # add penalty spot right
  annotate("point", x = 108 , y = 40, colour = "black", size = 1.05) +
  annotate("path", colour = "black", size = 0.6, x=60+10*cos(seq(0,2*pi,length.out=2000)), y=40+10*sin(seq(0,2*p
i,length.out=2000)))+
  # add centre spot
  annotate("point", x = 60 , y = 40, colour = "black", size = 1.05) +
  annotate("path", x=12+10*cos(seq(-0.3*pi,0.3*pi,length.out=30)), size = 0.6, y=40+10*sin(seq(-0.3*pi,0.3*pi,len
gth.out=30)), col="black") +
  annotate("path", x=107.84-10*cos(seq(-0.3*pi,0.3*pi,length.out=30)), size = 0.6, y=40-10*sin(seq(-0.3*pi,0.3*p
i,length.out=30)), col="black") +
  geom_point(data = shots, aes(x = location.x, y = location.y, fill = shot.statsbomb_xg, shape = shot.body_part.n
ame), size = 6, alpha = 0.8) +
  theme(axis.text.x=element_blank(),
        axis.title.x = element_blank(),
        axis.title.y = element_blank(),
        axis.text.y=element_blank(),
        legend.position = "top",
        legend.title=element_text(size=20,family="sans"),
        legend.text=element_text(size=20,family="sans"),
        legend.margin = margin(c(20, 10, -85, 50)),
        legend.key.size = unit(1.5, "cm"),
        legend.direction = "horizontal",
        legend.title.align=0.5,
        axis.ticks=element_blank(),
        aspect.ratio = c(65/100),
        plot.background = element_rect(fill = "white")) +
  scale_fill_gradientn(colours = shotmapxgcolors, limit = c(0,0.8), oob=scales::squish, name = "Expected Goals Va
lue") +
  scale_shape_manual(values = c("Head" = 21, "Right Foot" = 23, "Left Foot" = 24), name ="") +
  guides(fill = guide_colourbar(title.position = "top"),
  shape = guide_legend(override.aes = list(size = 7, fill = "black"))) +
  coord_flip(xlim = c(85, 125))
```

```
#Shot Maps - Player - Alexandra Popp
shots1 = StatsBombData %>%
  filter(type.name=="Shot" & (shot.type.name!="Penalty" | is.na(shot.type.name)) & player.name=="Alexandra Popp")

ggplot() +
  annotate("rect",xmin = 0, xmax = 120, ymin = 0, ymax = 80, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = 60, ymin = 0, ymax = 80, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 18, xmax = 0, ymin = 18, ymax = 62, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 102, xmax = 120, ymin = 18, ymax = 62, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = 6, ymin = 30, ymax = 50, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 120, xmax = 114, ymin = 30, ymax = 50, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 120, xmax = 120.5, ymin =36, ymax = 44, fill = NA, colour = "black", size = 0.6) +
  annotate("rect",xmin = 0, xmax = -0.5, ymin =36, ymax = 44, fill = NA, colour = "black", size = 0.6) +
  annotate("segment", x = 60, xend = 60, y = -0.5, yend = 80.5, colour = "black", size = 0.6)+
  annotate("segment", x = 0, xend = 0, y = 0, yend = 80, colour = "black", size = 0.6)+
  annotate("segment", x = 120, xend = 120, y = 0, yend = 80, colour = "black", size = 0.6)+
  theme(rect = element_blank(),
        line = element_blank()) +
  # add penalty spot right
  annotate("point", x = 108 , y = 40, colour = "black", size = 1.05) +
  annotate("path", colour = "black", size = 0.6, x=60+10*cos(seq(0,2*pi,length.out=2000)), y=40+10*sin(seq(0,2*p
i,length.out=2000)))+
  # add centre spot
  annotate("point", x = 60 , y = 40, colour = "black", size = 1.05) +
  annotate("path", x=12+10*cos(seq(-0.3*pi,0.3*pi,length.out=30)), size = 0.6, y=40+10*sin(seq(-0.3*pi,0.3*pi,len
gth.out=30)), col="black") +
  annotate("path", x=107.84-10*cos(seq(-0.3*pi,0.3*pi,length.out=30)), size = 0.6, y=40-10*sin(seq(-0.3*pi,0.3*p
i,length.out=30)), col="black") +
  geom_point(data = shots1, aes(x = location.x, y = location.y, fill = shot.statsbomb_xg, shape = shot.body_part.
name), size = 6, alpha = 0.8) +
  theme(axis.text.x=element_blank(),
        axis.title.x = element_blank(),
        axis.title.y = element_blank(),
        axis.text.y=element_blank(),
        legend.position = "top",
        legend.title=element_text(size=20,family="sans"),
        legend.text=element_text(size=20,family="sans"),
        legend.margin = margin(c(20, 10, -85, 50)),
        legend.key.size = unit(1.5, "cm"),
        legend.title.align=0.5,
        legend.direction = "horizontal",
        axis.ticks=element_blank(),
        aspect.ratio = c(65/100),
        plot.background = element_rect(fill = "white")) +
  scale_fill_gradientn(colours = shotmapxgcolors, limit = c(0,0.8), oob=scales::squish, name = "Expected Goals Va
lue") +
  scale_shape_manual(values = c("Head" = 21, "Right Foot" = 23, "Left Foot" = 24), name ="") +
  guides(fill = guide_colourbar(title.position = "top"),
         shape = guide_legend(override.aes = list(size = 7, fill = "black"))) +
  coord_flip(xlim = c(85, 125))
```

```
# Shots Maps
library(ggsoccer)

Final  <- matches %>%
filter(competition_stage.name=="Final")

events_df <- get.matchFree(Final)
clean_df <- allclean(events_df)

england_shot <- clean_df %>%
  filter(type.name == 'Shot') %>%
  filter(team.name == "England Women's") %>%
  select(player.name, location.x, location.y, shot.end_location.x, shot.end_location.y, shot.statsbomb_xg)

germany_shot <- clean_df %>%
  filter(type.name == 'Shot') %>%
  filter(team.name == "Germany Women's") %>%
  select(player.name, location.x, location.y, shot.end_location.x, shot.end_location.y, shot.statsbomb_xg)

ggplot() +
  annotate_pitch(dimensions = pitch_statsbomb, colour='black', fill='white') +
  geom_point(data=england_shot, aes(x=location.x, y=location.y, size=shot.statsbomb_xg), color="#e20c16") +
  geom_point(data=germany_shot, aes(x=120-location.x, y=location.y, size=shot.statsbomb_xg), color="#ffd900") +
  labs(
    title="England vs Germany",
    subtitle = "Shots Map | UEFA Women's Euro Final, 2022") +
  theme(
    plot.background = element_rect(fill='white', color='white'),
    panel.background = element_rect(fill='white', color='white'),
    axis.title.x = element_blank(),
    axis.title.y = element_blank(),
    axis.text.x = element_blank(),
    axis.text.y = element_blank(),
    panel.grid.major = element_blank(),
    panel.grid.minor = element_blank(),
    text = element_text(family="Geneva", color='black'),
    plot.title = element_text(hjust=0.5, vjust=0, size=14),
    plot.subtitle = element_text(hjust=0.5, vjust=0, size=8),
    plot.caption = element_text(hjust=0.5),
    plot.margin = margin(2, 2, 2, 2),
    legend.position = "none"
  )
```

```
#Pressure Heat Map - England
England_pressure <- clean_df %>%
  filter(team.name == "England Women's") %>%
  filter(type.name == 'Pressure')

new_palette=shotmapxgcolors

ggplot(England_pressure) +
  scale_fill_manual(values = new_palette, labels=c('(0.0,0.1)','(0.1,0.2)','(0.2,0.3)','(0.3,0.4)','(0.4,0.5)','(
0.5,0.6)','(0.6,0.7)','(0.7,0.8)','(0.8,0.9)','(0.9,1.0)')) +
  geom_density2d_filled(aes(location.x, location.y, fill=..level..), alpha=1, contour_var='ndensity') +
  annotate_pitch(dimensions = pitch_statsbomb, fill='white', alpha=0, colour='black') +
  scale_x_continuous(c(0, 120)) +
  scale_y_continuous(c(0, 80)) +
  labs(title="England Women's Pressure Heat Map",
       subtitle="UEFA Women's Euro Final, 2022") +
  theme_minimal() +
  theme(
    plot.background = element_rect(fill='white', color='white'),
    panel.background = element_rect(fill='white', color='white'),
    plot.title = element_text(hjust=0.5, vjust=0, size=14),
    plot.subtitle = element_text(hjust=0.5, vjust=0, size=8),
    plot.caption = element_text(hjust=0.5),
    text = element_text(family="Geneva", color='black'),
    panel.grid = element_blank(),
    axis.title = element_blank(),
    axis.text = element_blank(),
    legend.position = "right",
    legend.direction = "vertical",
    legend.title = element_blank(),
    legend.text=element_text(size=17,family="geneva"),
    legend.key.size = unit(1.5, "cm")
  )
```

```
#Pressure Heat Map - Germany
Germany_pressure <- clean_df %>%
  filter(team.name == "Germany Women's") %>%
  filter(type.name == 'Pressure')

ggplot(Germany_pressure) +
  scale_fill_manual(values = new_palette, labels=c('(0.0,0.1)','(0.1,0.2)','(0.2,0.3)','(0.3,0.4)','(0.4,0.5)','(
0.5,0.6)','(0.6,0.7)','(0.7,0.8)','(0.8,0.9)','(0.9,1.0)')) +
  geom_density2d_filled(aes(location.x, location.y, fill=..level..), alpha=1, contour_var='ndensity') +
  annotate_pitch(dimensions = pitch_statsbomb, fill='white', alpha=0, colour='black') +
  scale_x_continuous(c(0, 120)) +
  scale_y_continuous(c(0, 80)) +
  labs(title="Germany Women's Pressure Heat Map",
      subtitle="UEFA Women's Euro Final, 2022") +
  theme_minimal() +
  theme(
    plot.background = element_rect(fill='white', color='white'),
    panel.background = element_rect(fill='white', color='white'),
    plot.title = element_text(hjust=0.5, vjust=0, size=14),
    plot.subtitle = element_text(hjust=0.5, vjust=0, size=8),
    plot.caption = element_text(hjust=0.5),
    text = element_text(family="Geneva", color='black'),
    panel.grid = element_blank(),
    axis.title = element_blank(),
    axis.text = element_blank(),
    legend.position = "right",
    legend.direction = "vertical",
    legend.title = element_blank(),
    legend.text=element_text(size=17,family="geneva"),
    legend.key.size = unit(1.5, "cm")
  )
```