Climbers Over Time at La Débarque

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```r
library(ggplot2)
library(ggforce)
library(scales)
```

```r
attendance <- data.frame(
                    read.csv("./debarque.csv",
                             header=TRUE,
                             sep=","))
attendance$DAY <- as.POSIXct(attendance$DAY,format="%Y-%m-%d")
attendance$TIME <- as.POSIXct(attendance$TIME,format="%R")
attendance$WEEKDAY <- weekdays(attendance$DAY)
attendance$WEEKDAY <- factor(attendance$WEEKDAY,
                        levels=c(
                                "Sunday",
                                "Monday",
                                "Tuesday",
                                "Wednesday",
                                "Thursday",
                                "Friday",
                                "Saturday"))
```

```r
# Day of the week averages
week <- ggplot(attendance,
               aes(x=TIME,
                   y=CLIMBERS,
                   group=WEEKDAY,
                   col=as.factor(DAY))) +
  geom_path(group=attendance$DAY) +
  geom_smooth(method="gam") +
  scale_y_continuous(
    breaks=seq(1,25,2),
    limits=c(0,25),
    labels = scales::number_format(accuracy = 1)) +
  scale_x_datetime(
    labels=date_format("%R", tz="America/Toronto"),
    date_breaks="2 hours") +
  labs(x="Time of day",
       y="Number of climbers") +
  theme(legend.position="none") +
  facet_wrap(~WEEKDAY)
```

```r
# Daily attendances through time
timeline <- ggplot(attendance, aes(x=DAY, y=CLIMBERS)) +
  geom_line(stat="summary", fun=mean)
```

```
## 'geom_smooth()' using formula 'y ~ s(x, bs = "cs")'
## Warning: Removed 68 rows containing missing values (geom_smooth).
```