Methods

Mission log data were downloaded from the internal web on March 25, 2018. Mission log data contains all incidents, and missions (including those quickly cancelled) from 1998-2017.

A dataset was created with a sum of the number of missions for each day (including all dates where there were no missions)

Statistical Methods

A log-link, Poisson maximum likelihood estimation model with random effects with mean 0 for year, day of the week, and month.

Making Predictions

After fitting the model, feed the “predict” function based on that model fit all combinations of year, month, and day of the week. Exponentiate these values to get the expected count of missions happening on any given weekday in each month.