# GMU – CoS Team

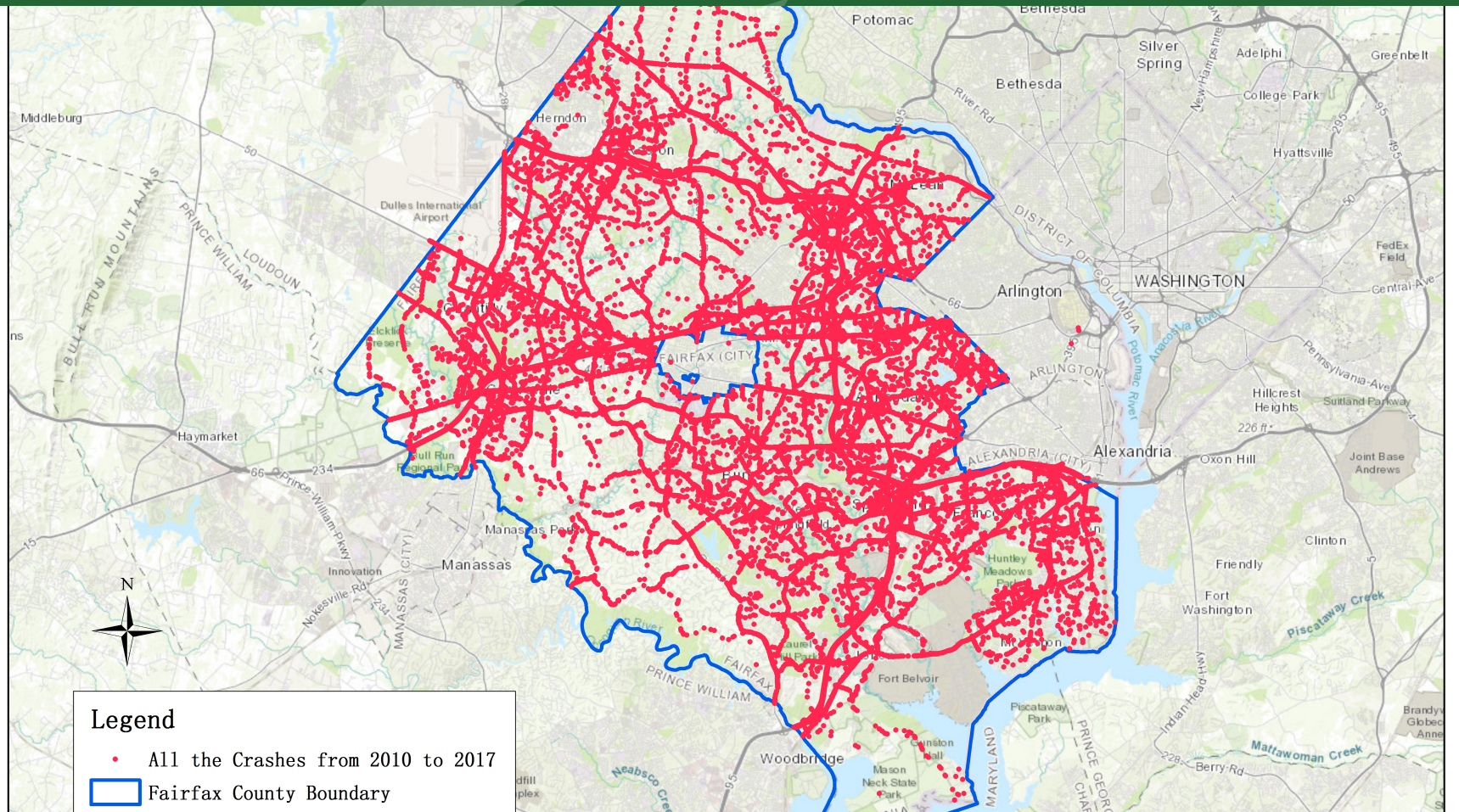## Transportation & Mobility Hackathon
## 16-17 November, 2017

## CRASH ORACLE

*AI-supported Early Warning of Car Accidents in Fairfax County*
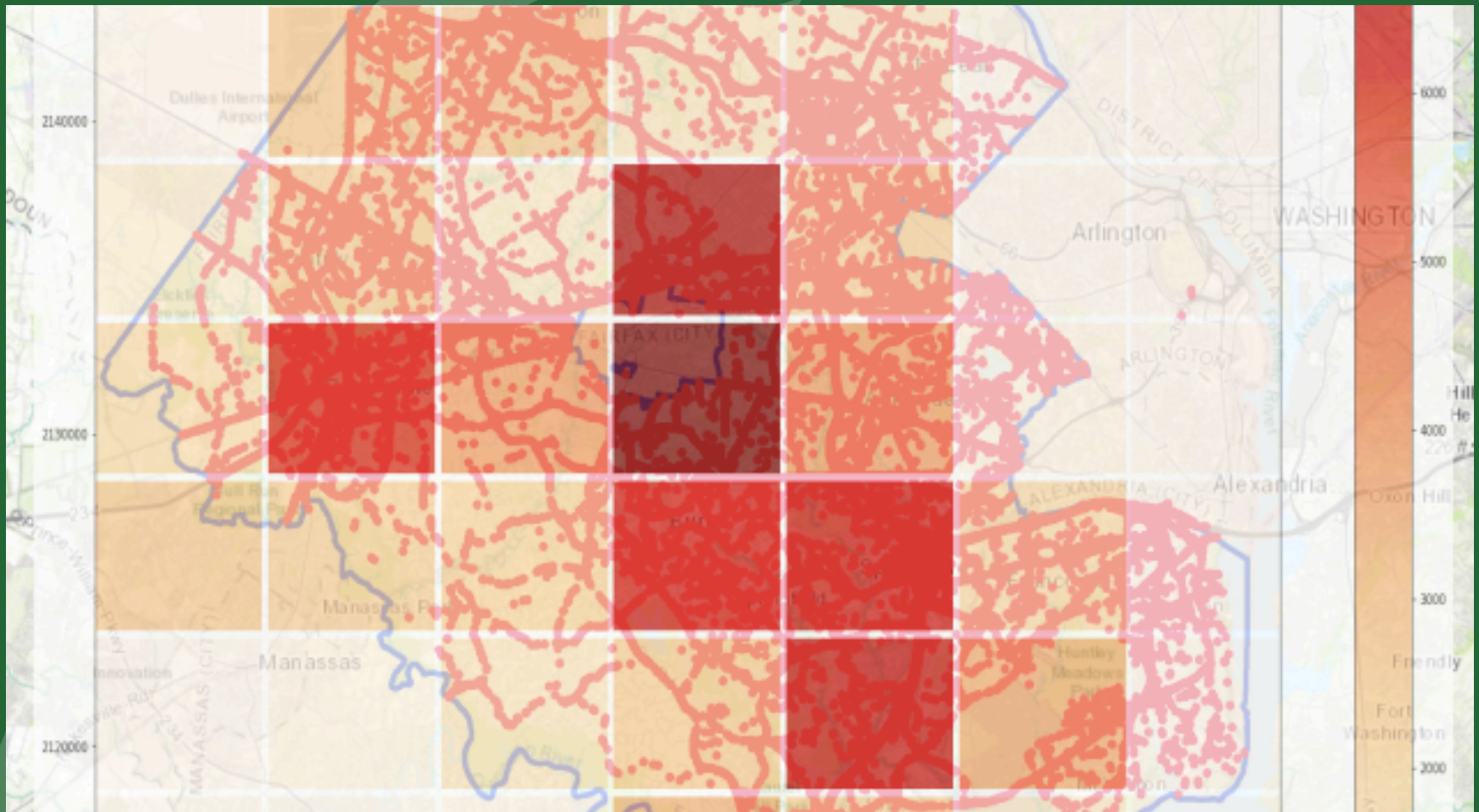
"NSF – Algorithms in the Field"

GEORGE MASON UNIVERSITY
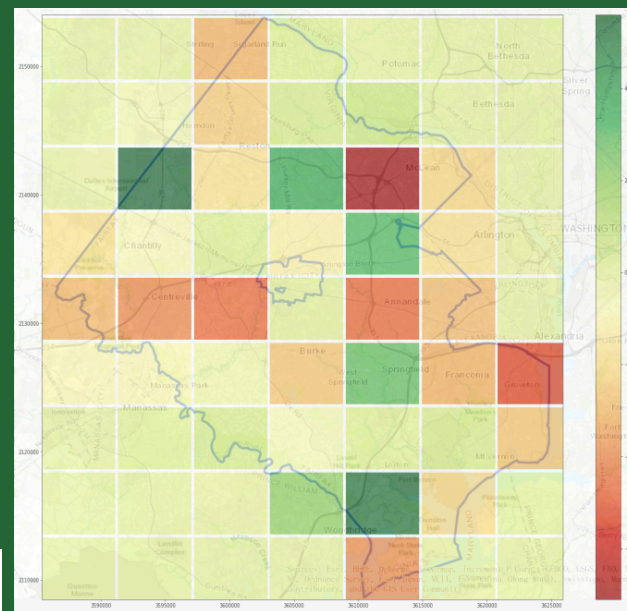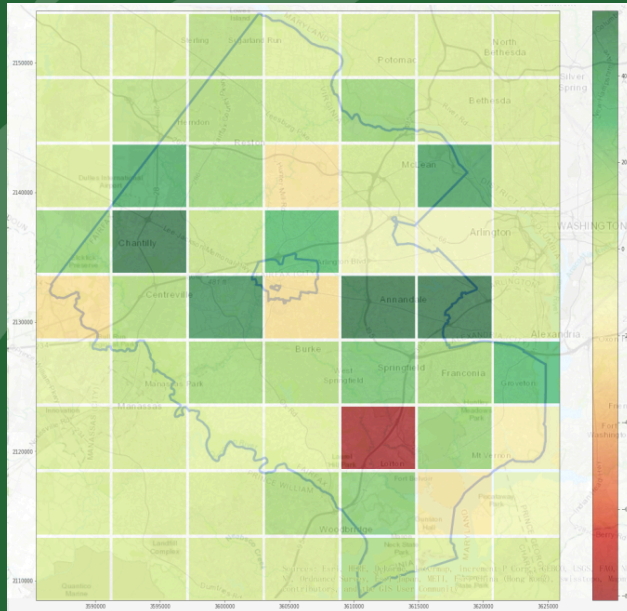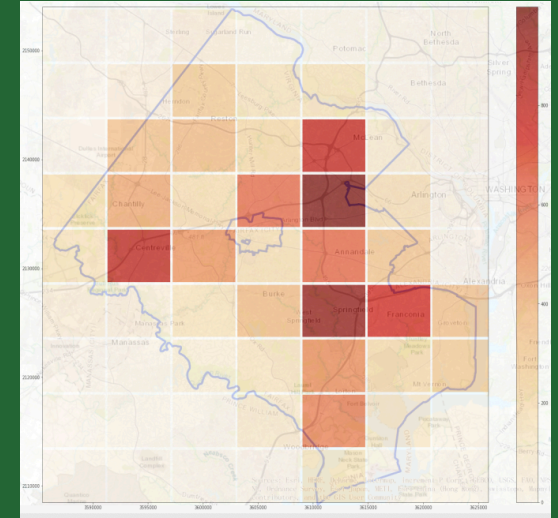
College of Science

# Crash incidents of Fairfax County



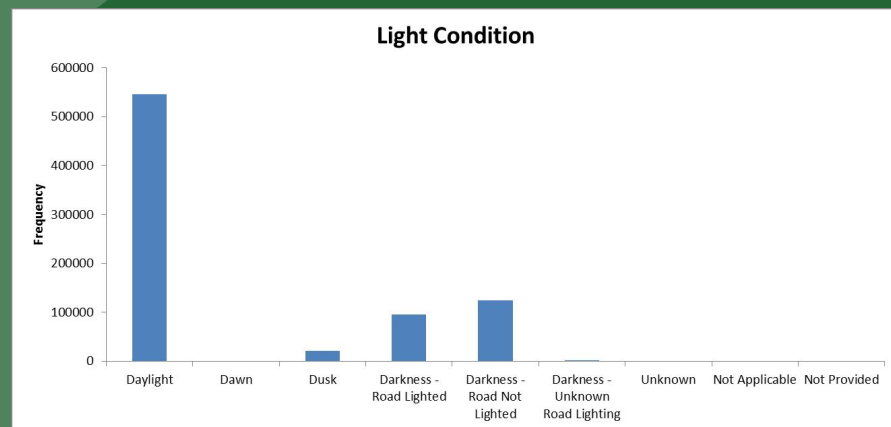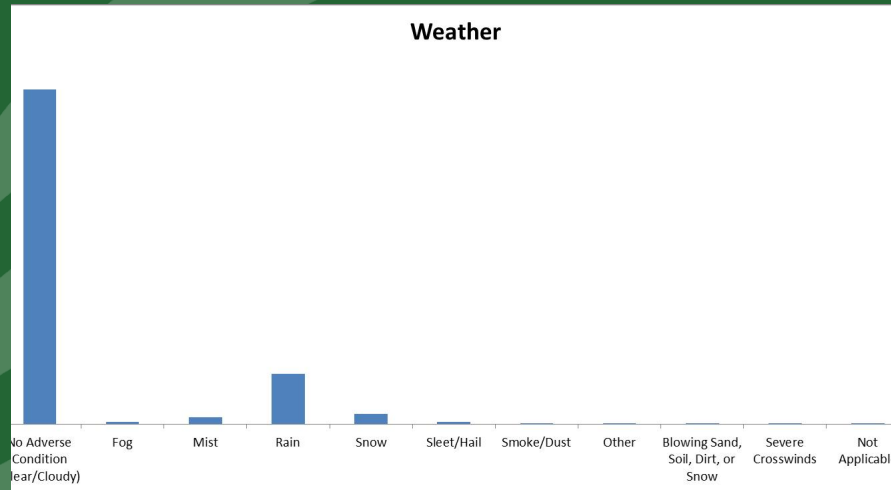Legend
- All the Crashes from 2010 to 2017
- Fairfax County Boundary

# Spatial Grid – 7 years heatmap

# Crash Frequency in Recent Years
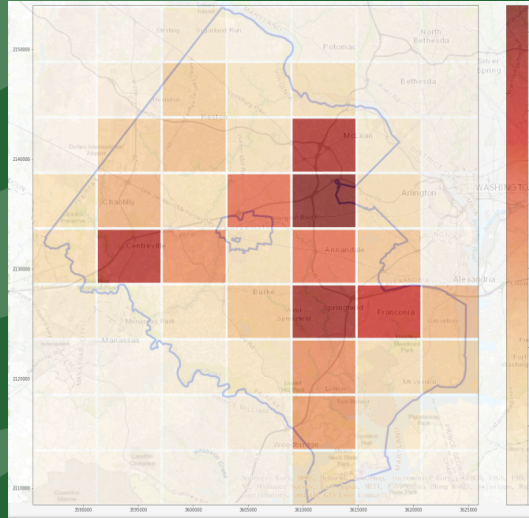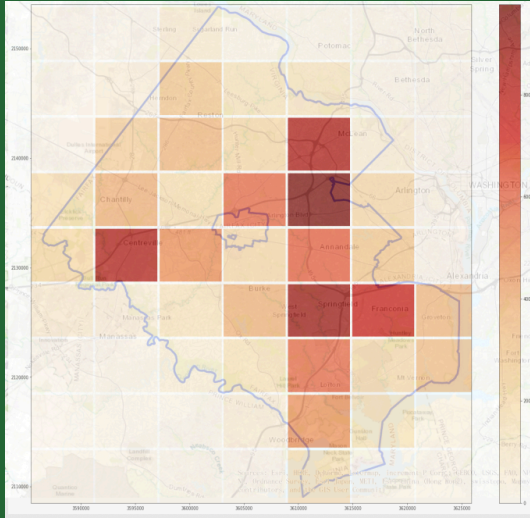
# Different Conditions

# AI system based on Knowledge-network

**Facts we know**

- Season
- Weather
- Week pattern
- Traffic condition

…

Poisson-distribution signal

**Facts happened, but we do not know when**

- Motorcyclist
- Bicyclist
- Deer
- Road condition
- Pedestrian

…

**Crash predection**

- Motorcyclist
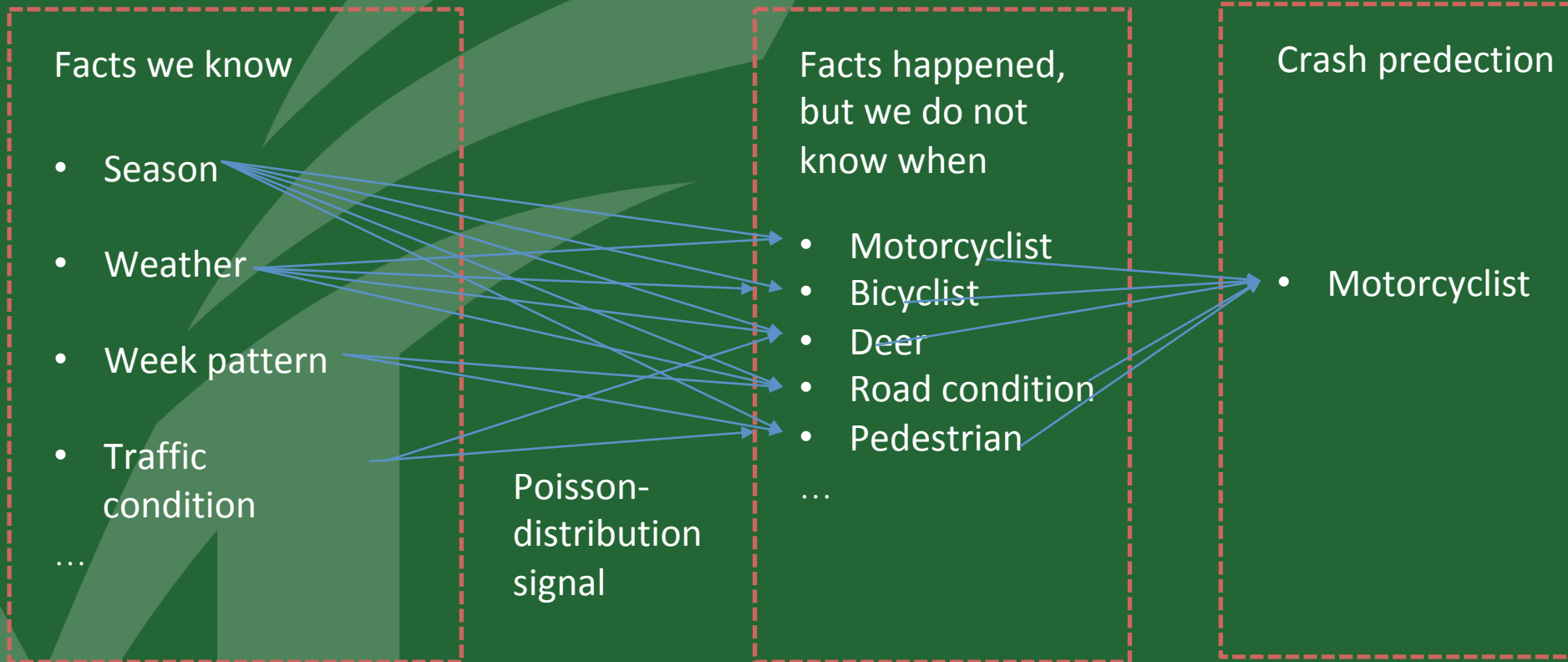
# Conclusions

- Early Prediction of Car Accidents
  - Assists Police Brigades
  - Prepares Health Respondents
  - Alerts Drivers
  - Saves Lives!