DETERMINING TRAFFIC ENFORCEMENT STRATEGIES USING A SPACE-TIME CUBE

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ABOUT ME

- Analyst with SLCPD 2+ years
  - 3 analysts with specific geographic locations and specialized units
- My areas: low crime, more specialized units and admin analysis
- Highway Safety Unit: crash and DWI analysis regularly
- Work for other municipalities and present data analysis regionally
ST LOUIS COUNTY POLICE DEPARTMENT

- Largest department in county
- 90 municipalities
- 50 or so police departments
- Patrol 400k of 1.1 million of population
- Nearly 900 sworn
**PROBLEM**

- **Came from Highway Safety Unit**
  - Responsible for traffic safety in patrol areas but can also go outside of SLCPD patrol areas
- **Needed to put an officer from 12pm to 10pm to patrol for crash prevention**
- **Would need to many maps that couldn’t indicate time very well**
  - Creates patrol strategy to place officer at highest crash locations at certain times
USING "CREATE SPACE TIME CUBE"

- Geocoded/XY shapefile
- Field with date AND time
- Can change what date/hour you want to be “near ground”
- What type of grid?
- What time interval do you want the cubes to represent?
- How big should the bins be?
VISUALIZE AND STYLE

- Could only do a count of bins → no neighbors for analysis
- Use familiar coloration- green to red like stop light
- Using for strategy so not interested in where crashes aren’t
  - make “green” bins more transparent so its easier to read “red” bins
BETA TEST

Animation with Exploration
USE FOR DWI SATURATION PATROLS
QUESTIONS?