MOBILITY SENSING AND DATA ANALYTICS FOR SMART CITIES

Kade Townsend
Dr. Jason Hallstrom and Dr. Jiannan Zhai
BACKGROUND INFORMATION

- Smart Cities
- Mobility Sensing
- Economic Development
- Service Optimization
MobIntel

How it works

- Sensors
- MAC Address
- RSSI
- Privacy-First

Challenges

- Unchecked Data
- Loss of Power
PROJECT GOALS

- Determine Sensor Power
- Trendline Forecasting
- Verify Data
- Compare with Google Maps Popular Times and Sensor Correlation
- Describe Data
  - Seaborn and Matplotlib
PROBE COUNTS PER DAY OF WEEK

**Total**

![Total Probe Count Per Day of Week](chart1.png)

**Average**

![Average Probe Count Per Day of Week](chart2.png)
PROBE COUNTS PER DAY

Average
PROBE COUNTS PER HOUR

Total

Average
GOOGLE MAPS POPULAR TIMES
TRENDLINE FORECASTING

- Calculating next value from trendline of previous data points

**LINEAR**
- First-Order

**QUADRATIC**
- Second-Order
LINEAR

OFF

OFF
QUADRATIC

ON

OFF
FUTURE PROJECT GOALS

Machine Learning

Verify More Data
Thanks

Southwestern University
Florida Atlantic University
National Science Foundation
This presentation template was created by Slidesgo, and includes icons by Flaticon and infographics & images by Freepik.