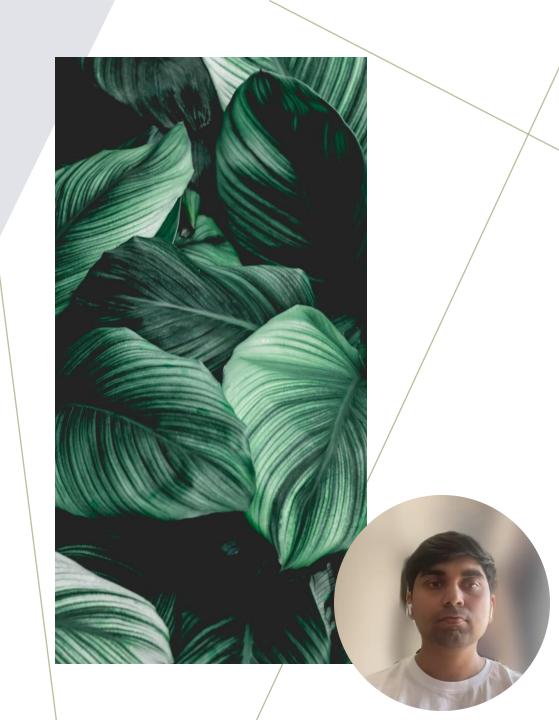
ADDRESSING NYC'S NOISE CHALLENGE DATA-DRIVEN SOLUTIONS FOR A QUIETER CITY

NORTHEASTERN UNIVERSITY
EAI 6120 AI VISUALIZATION AND COMMUNICATION
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MALAK PARMAR
DECEMBER 15, 2025



AGENDA:



Current State Analysis



Complaint Analysis



Temporal Patterns



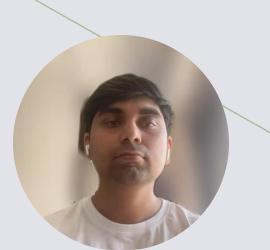
Location and Response



Recommendations



Implementation Plan





EXECUTIVE SUMMARY



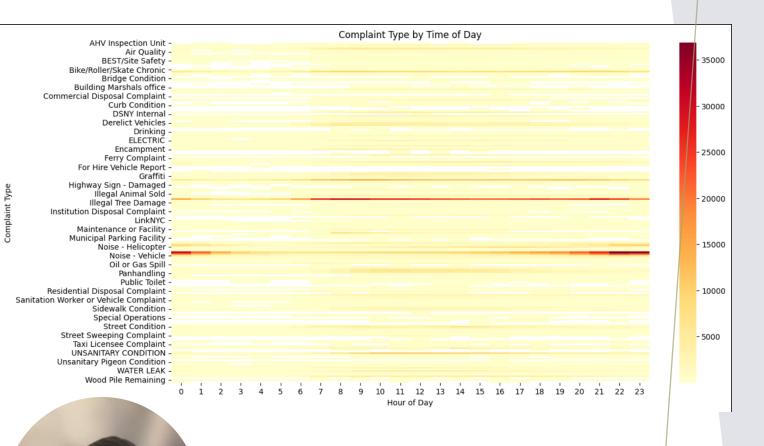
Analysis of over 3 million noise complaints from 2010-2024



Focus on patterns, hotspots, and actionable solutions

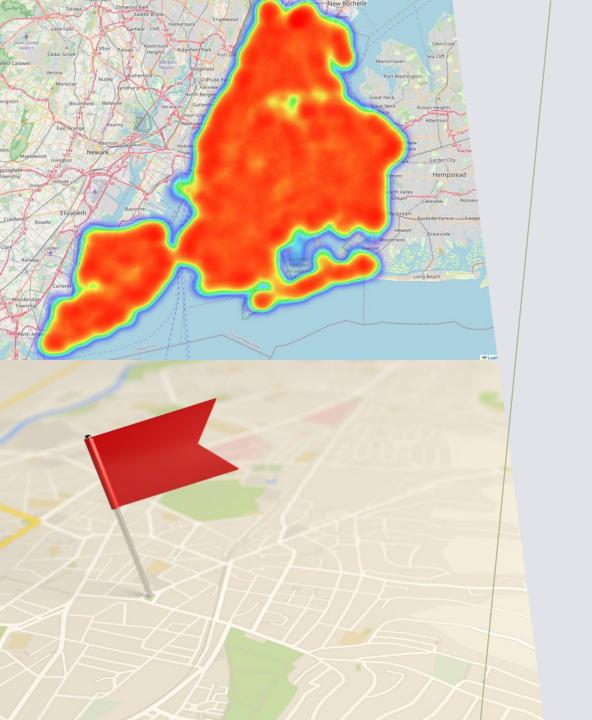


Goal: Improve quality of life for New Yorkers



CURRENT STATE OF NOISE IN NYC

- Key Findings from Data
 - Highest concentration of complaints in Manhattan and parts of Brooklyn
 - Vehicle noise is the most persistent issue throughout the day
 - Clear patterns in complaint timing and location

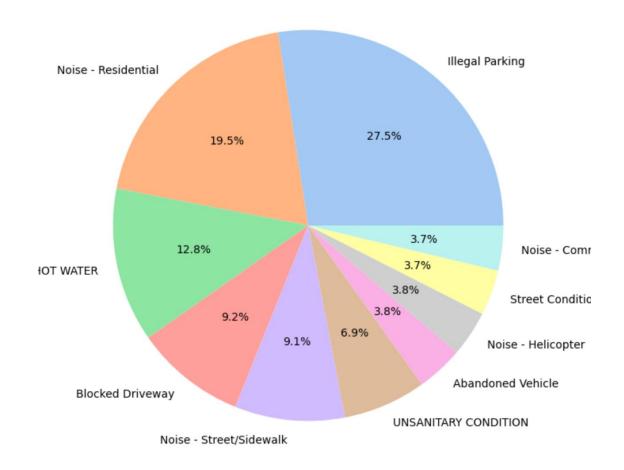


GEOGRAPHIC HOTSPOTS

- Heat map shows intense activity in:
 - Lower Manhattan
 - Upper East Side
 - Western Brooklyn

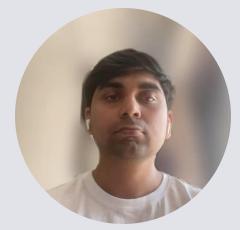


Top 10 Noise Complaint Types



COMPLAINT PATTERNS

- Time-Based Trends
 - Peak hours: Evening (7 PM 11 PM)
 - Vehicle noise remains consistent throughout day
 - Helicopter noise shows specific time patterns



LOCATION ANALYSIS



MODZCTA data shows varying complaint levels

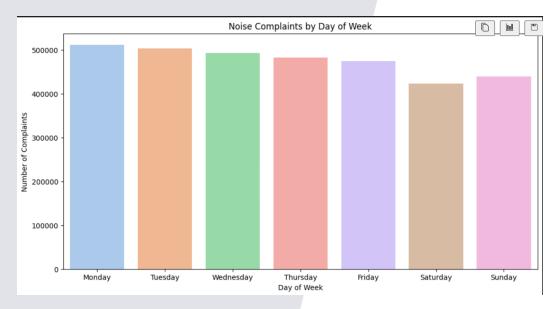


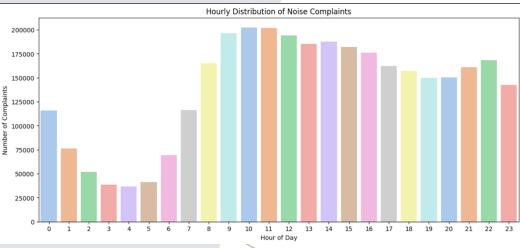
Some areas reporting over 3,400 complaints



Clear correlation between population density and noise levels



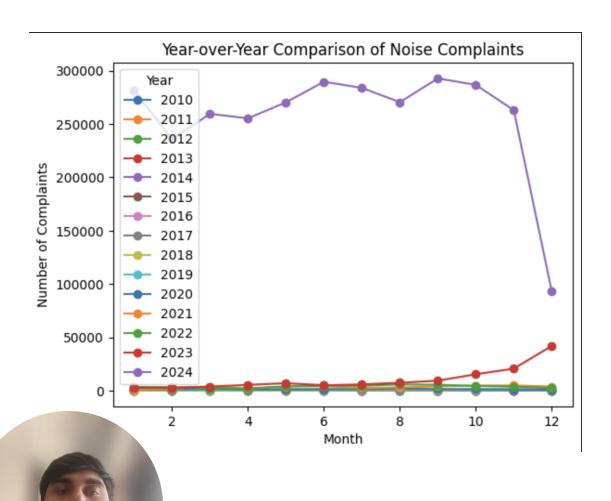




IMPACT ASSESSMENT

- Current Challenges
 - Vehicle noise dominates complaints across all hours
 - Concentrated hotspots in residential areas
 - Multiple types of noise affecting different neighborhoods
- Community Impact
 - Quality of life issues
 - Health concerns
 - Economic effects on businesses





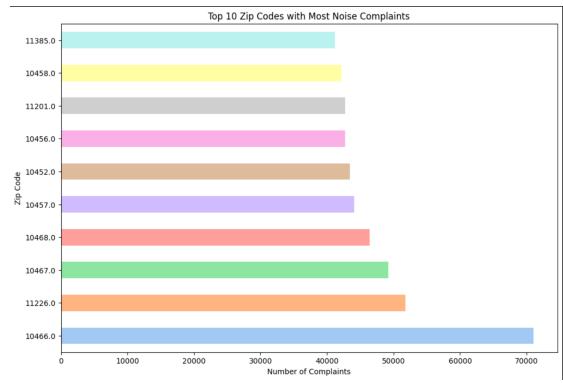
RECOMMENDED ACTIONS

Immediate Steps

- Enhanced enforcement during peak hours
- Targeted patrols in high-complaint areas
- Public awareness campaigns

Long-term Solutions

- Noise reduction infrastructure in hotspots
- Updated noise codes for modern urban environment
- Cross-agency coordination system





IMPLEMENTATION PLAN

Phase 1 (First 6 Months)

- Focus on top 5 complaint areas
- Deploy rapid response teams
- Start community engagement

Phase 2 (6-18 Months)

- Expand to secondary hotspots
- Implement infrastructure improvements
- Evaluate and adjust strategies

EXPECTED OUTCOMES

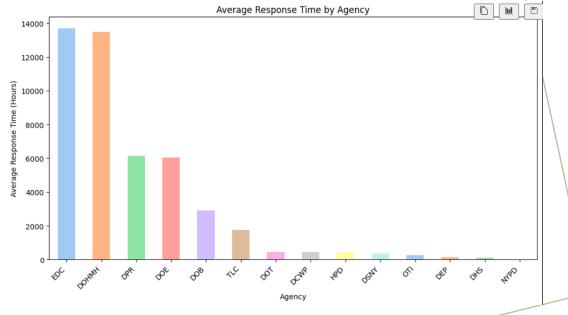
Without Action

- Continued increase in complaints
- Growing resident dissatisfaction
- Potential economic impact

With Proposed Solutions

- 20-30% reduction in complaints within first year
- Improved response times
- Better quality of life for residents





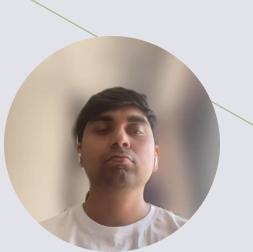
BUDGET AND RESOURCES

Required Investment

- Enforcement team expansion
- Noise monitoring equipment
- Public education programs

Return on Investment

- Reduced complaint handling costs
- Increased property values
- Improved city reputation



CONCLUSION

Key Takeaways:

- Data shows clear patterns in noise complaints
- Solutions require multi-agency approach
- Immediate action can yield significant improvements

Next Steps:

- Approve resource allocation
- Begin Phase 1 implementation
- Set up monitoring system

