JusticeWatch: Texas Police Accountability Platform - Technical Report

Purpose and Motivation:
JusticeWatch is a civic engagement platform designed to visualize and track police brutality, related legislation, and department accountability across Texas. The project aims to increase transparency and public awareness of policing issues, ultimately contributing to improved accountability and policy reform. The platform serves as a comprehensive resource for citizens, activists, policymakers, and researchers to access and analyze data on police misconduct, legislative efforts, and departmental performance.

Architecture and Technology Stack:
JusticeWatch employs a modern web architecture with a PostgreSQL database, Python backend with Restful framework for API development, and a React.js frontend.

API Documentation:
The RESTful API provides endpoints for incidents and departments, and aggregated statistics. Key routes include:

- GET /api/incidents/: List all incidents
- GET /api/departments/: List all police departments

Models and Instances:

1. Police Misconduct Incidents (~13,000 instances): Captures details of incidents including date, location, victim information, and outcome.
2. Legislation Tracker (~8,000 instances): Tracks police reform bills, including status, sponsors, and topics covered.
3. Police Department Accountability Scorecards (1,000+ instances): Stores department performance metrics, funding information, and demographic data.

Toolchain and Hosting:
Development utilizes Git for version control, with GitHub Actions for CI/CD. The application is containerized using Docker and deployed on AWS for scalability.

Challenges and Solutions:

1. Data Integration: Combining data from disparate sources with varying formats posed a significant challenge.
2. Performance Optimization: With large datasets and complex queries, initial load times is suboptimal.
3. Geospatial Visualization: Rendering thousands of incidents on a map will cause performance issues.
4. Data Currency: Keeping the platform updated with the latest information is crucial.