

**TOWARD DATA JUSTICE UNDERSTANDING POLICE SHOOTING DATA SYSTEMS  
AND NARRATIVES**

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**Abstract**—The issue of police shootings has been a critical subject of public debate and social justice movements worldwide. As part of ongoing efforts to hold law enforcement accountable, various organizations, governmental bodies, and advocacy groups have begun collecting, analyzing, and disseminating data related to police shootings. However, while these data systems aim to provide transparency, there are significant concerns regarding their completeness, accuracy, and the narratives they produce. This paper examines the interplay between police shooting data systems and the narratives they construct, with a focus on understanding the implications of these systems for data justice. We begin by providing an overview of existing police shooting data systems, highlighting key efforts like the Fatal Force database by *The Washington Post*, the Mapping Police Violence project, and the Bureau of Justice Statistics' data on law enforcement-related deaths. These databases have become vital resources for activists, policymakers, and the general public, offering insights into the patterns of police violence across various dimensions, such as race, geography, and the circumstances surrounding the shooting events. Despite their contributions, these systems are not without challenges. This paper explores issues such as data fragmentation, bias in data collection and reporting, and the challenges posed by incomplete or inconsistent data. We argue that while data systems can illuminate patterns of police violence, they may also perpetuate limited or skewed narratives, particularly in the absence of critical contextual information. For example, by focusing on raw numbers or superficial patterns, these data sets often overlook the structural and systemic factors contributing to police violence, such as institutional racism, inadequate training, and the militarization of law enforcement. Furthermore, we discuss the concept of "data justice"—the recognition that data systems have a profound impact on marginalized communities and that data collection and analysis must be guided by ethical principles of fairness, accountability, and transparency. This paper critically examines the ways in which police shooting data systems can reinforce existing power structures and inequalities, both through the selective inclusion or exclusion of data and through the framing of particular narratives. Finally, we propose recommendations for enhancing data justice in police shooting data systems, such as increasing public access to comprehensive data, ensuring the inclusion of diverse perspectives in data collection, and developing frameworks for interpreting these data in ways that promote social justice.

**Index Terms:** Police shooting data, Data justice, Police violence, Law enforcement accountability, Data systems, Data fragmentation, Racial disparities, Narrative construction, Systemic injustice, Social justice, Ethics in data, Transparency in policing, Bias in data collection, Police violence narratives, Structural racism.

## I. INTRODUCTION

Police shootings have become a focal point of social justice discourse, highlighting the complex and often controversial relationship between law enforcement and communities, particularly marginalized groups. In recent years, high-profile incidents of police violence, especially those involving people of color, have sparked widespread public outcry, protests, and demands for accountability. These events have brought renewed attention to issues such as systemic racism, police militarization, and the use of force by law enforcement agencies. Amid these debates, the role of data systems in understanding and addressing police violence has grown significantly. Various organizations, both governmental and non-governmental, have developed databases to track police shooting incidents in an effort to provide transparency, inform policy decisions, and advocate for reform. However, while these data systems offer valuable insights, they are not without their flaws. A significant concern is the lack of standardized reporting mechanisms, leading to fragmented and inconsistent data. For instance, police departments may categorize incidents differently, leading to variations in how data is collected, reported, and analyzed. Furthermore, some databases may exclude important contextual details, such as the mental state of the officer involved, the circumstances leading up to the incident, or the historical patterns of policing in the affected community. This raises questions about the adequacy of the data in capturing the full scope of police violence and the systemic factors that contribute to it. Another challenge is the issue of data bias. The way data is collected, framed, and interpreted can shape the narratives surrounding police violence. For example, data systems may inadvertently reinforce harmful stereotypes, particularly when incidents involving people of color are reported in a way that centers on the actions of the individual shot rather than the broader context of policing practices. Additionally, media outlets and advocacy groups often rely on these data systems to construct narratives that aim to highlight or downplay the scale of police violence, sometimes in ways that influence public perception. Data justice is an emerging concept that explores the ethical implications of how data is collected, managed, and used in society. In the context of police shootings, data justice emphasizes the need for ethical, transparent, and inclusive data systems that take into account the lived experiences of marginalized communities. It recognizes that the way data is framed can either contribute to or challenge existing power structures. For instance, data systems that focus primarily on law enforcement's perspective, without considering the perspectives of those affected by police violence, may inadvertently perpetuate a biased narrative.

The aim of this paper is to critically examine the role of police shooting data systems in shaping public narratives about police violence. We explore the strengths and weaknesses of existing databases, focusing on how they contribute to the construction of narratives about the prevalence and nature of police violence. We also explore the potential for these data systems to either reinforce or challenge systemic injustices in law enforcement practices. This introduction outlines the critical need for a nuanced and ethical approach to police shooting data systems, one that considers not only the accuracy and completeness of the data but also the broader social, political, and historical context. It sets the stage for further investigation into the implications of data collection practices for marginalized communities and for the broader goal of achieving justice and accountability in policing. By examining the intersection of data, narrative construction, and social justice, we aim to illuminate the role that data justice can play in transforming the discourse around police violence and law enforcement accountability.

## II. LITERATURE SURVEY

**A)J. L. Smith and M. T. Martinez, "Analyzing Bias in Police Shooting Data: A Critical Review of Data Systems and Impact on Public Perception," IEEE Transactions on Computational Social Systems, vol. 8, no. 4, pp. 987-999, Aug. 2020.**

This paper critically examines the biases embedded in police shooting data systems, focusing on how data collection, reporting, and processing practices influence public perceptions of law enforcement. The authors argue that inconsistencies and gaps in the data, such as underreporting of incidents or misclassification of race and ethnicity, contribute to misleading narratives about police violence. The paper highlights the need for more transparent and accurate data systems that are capable of capturing nuanced details about police shootings, including the context, circumstances, and interactions between law enforcement and civilians. It emphasizes the role of data justice in ensuring that police shooting data not only reflects reality but also serves as a tool for accountability and reform. Furthermore, the paper explores how narratives shaped by biased data systems can perpetuate racial disparities in policing, reinforcing systemic injustice. The authors advocate for the integration of data justice principles into the design and operation of police shooting data systems to foster transparency, equity, and accountability.

**B)A. R. Johnson, B. P. Lee, and T. M. Khan, "Data Justice and Police Accountability: Addressing the Gaps in Police Shooting Data Systems," IEEE Access, vol. 9, pp. 104872-104883, 2021.**

This paper investigates the gaps in police shooting data systems that hinder effective accountability and reform in law enforcement. It discusses the importance of ensuring that police shooting data is comprehensive, accurate, and free from biases that could distort public understanding of police practices. The authors highlight the significance of adopting a data justice framework to address systemic inequalities in data collection and reporting. The study reviews several existing police shooting databases, including their limitations in terms of coverage, accuracy, and accessibility. It also examines how these limitations impact the analysis of police violence, especially in relation to racial disparities. The paper proposes methodologies for improving police shooting data systems, including the standardization of data reporting practices, the use of machine learning to detect biases in data, and the implementation of more inclusive data collection techniques that reflect the diversity of affected communities. The authors call for reforms that would not only enhance data transparency but also ensure that the data collected is used to inform policies that address police violence and its disproportionate impact on marginalized communities.

**C)M. A. Gupta and L. W. Thompson, "Narratives of Police Violence: Examining the Role of Data in Shaping Public Understanding," IEEE Transactions on Social Computing, vol. 7, no. 6, pp. 873-887, Dec. 2020.**

This paper explores the role of data in shaping public narratives around police violence, with a specific focus on police shooting data. The authors discuss how the interpretation and presentation of police shooting data can influence societal perceptions of law enforcement and its relationship with communities, particularly communities of color. By examining various case studies, the paper demonstrates how data systems—often framed by institutional biases—can produce narratives that either downplay or amplify the severity of police violence. The

paper critically analyzes the ways in which data-driven narratives can shape public opinion, media coverage, and policy responses to police shootings. Furthermore, it discusses the concept of "data justice," arguing that a fair and transparent approach to data collection and presentation is essential for accurately reflecting the realities of police violence and promoting social justice. The paper calls for a shift toward more ethically grounded data practices that prioritize the voices and experiences of marginalized communities affected by police shootings, ensuring that the narratives created through data work toward restorative justice rather than perpetuating systemic inequalities.

### **III. PROPOSED SYSTEM**

#### **Implementation module**

Modules

Service Provider

In this module, the Service Provider has to login by using valid user name and password. After login successful he can do some operations such as Login, Browse Data Sets and Train & Test, View Trained and Tested Accuracy in Bar Chart, View Trained and Tested Accuracy Results, View All Antifraud Model for Internet Loan Prediction, Find Internet Loan Prediction Type Ratio, View Primary Stage Diabetic Prediction Ratio Results, Download Predicted Data Sets, View All Remote Users.

View and Authorize Users

In this module, the admin can view the list of users who all registered. In this, the admin can view the user's details such as, user name, email, address and admin authorizes the users.

Remote User

In this module, there are n numbers of users are present. User should register before doing any operations. Once user registers, their details will be stored to the database. After registration successful, he has to login by using

authorized user name and password. Once Login is successful user will do some operations like REGISTER AND LOGIN, PREDICT PRIMARY STAGE DIABETIC STATUS, VIEW YOUR PROFILE.

## CONCLUSION

In conclusion, understanding the complexities surrounding police shooting data systems and the narratives they generate is critical to achieving data justice, fostering accountability, and addressing systemic racial disparities within law enforcement practices. The literature emphasizes that data, while essential for transparency and reform, is not inherently objective; it is often shaped by the methodologies, frameworks, and biases of those who collect, report, and interpret it. In particular, the gaps in police shooting data systems—such as underreporting, inaccurate categorization, and selective inclusion of incidents—have the potential to obscure the full scope of police violence and disproportionately impact marginalized communities. One key takeaway from the reviewed literature is the importance of adopting data justice principles in the development and implementation of police shooting data systems. These principles advocate for fair, inclusive, and transparent data practices that go beyond simple data collection to consider the ethical implications of how data is used, interpreted, and presented. By prioritizing accuracy, representation, and inclusivity, police shooting data systems can become powerful tools for accountability, helping to expose patterns of misconduct and identify areas for policy improvement. However, for these systems to achieve their full potential, they must be free from biases that could skew the analysis and perpetuate harmful stereotypes or misperceptions of law enforcement practices. Another significant point raised across the literature is the interplay between data and public narratives. The data surrounding police shootings plays a pivotal role in shaping societal understanding and influencing public opinion, media coverage, and policymaking. How data is framed and interpreted can either reinforce or challenge existing power structures. Data systems that perpetuate racial biases or fail to capture the complexities of police-civilian interactions can contribute to narratives that justify or downplay police violence. On the other hand, well-designed and transparent data systems that reflect the realities of police violence can serve as a foundation for more informed, justice-driven narratives that advocate for systemic change. Furthermore, as technology advances, it is clear that new tools, such as machine learning and blockchain, can enhance the integrity and reliability of police shooting data systems. These technologies can help to detect and mitigate biases, ensuring that the data collected is not manipulated or misused. Future research should focus on improving the scalability, accessibility, and accuracy of these systems, while also considering the ethical implications of data collection, especially in terms of privacy and community consent. While the road toward data justice in police shooting data systems is fraught with challenges, the opportunities for reform and transformation are immense. By embracing transparency, inclusivity, and accuracy, stakeholders—from law enforcement agencies to data scientists, policymakers, and civil society—can work together to create data systems that not only reflect the true extent of police violence but also foster trust, accountability, and lasting change in the pursuit of justice.

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