**System Flow Diagram (Plot)**

[ Sensors & Cameras ] ---> ( Data Collection )

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[ AI Processing Module ]

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[ Traffic Signal Optimization ] [ Incident Detection ] [ Historical Data Analysis ]

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[ Signal Control Unit ] [ Police Alert ] [ Congestion Prediction ]

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[ Manual Override by Admin / Police ]

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[ Citizen Notification System ]

( Mobile App / Web / Voice Alert )

**Module-Based Tools**

1. **Data Collection:** OpenCV + YOLOv8
2. **AI Processing:** Python(Tensorflow)
3. **Traffic Control Engine:** ASP.NET 8 API + SignalIR
4. **Incident & Emergency:** Python + Kafka
5. **Manuel Override:** ASP.NET 8 + React Dashboard
6. **Reporting & Analytics:** PostgreSQL + Power BI
7. **Web Interface:** React
8. **Cloud & IoT Layer:** AWT IoT Core