Project Title: Different Aspects of Automated Vehicles in Bangladesh

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The objective is to construct and analyze a comprehensive time-series dataset to examine various aspects of automated vehicles in Bangladesh. This study aims to investigate trends, patterns, and correlations related to the adoption, technological development, regulatory policies, infrastructure readiness, and socio-economic impacts of automated vehicles over time. Additionally, it seeks to identify challenges and opportunities for integrating autonomous transportation systems into the existing infrastructure while providing data-driven insights to support policy-making and future advancements in this domain.

**Data Collection and Sources:** This study relies on both primary and secondary data sources to investigate the trends, challenges, and potential of automated vehicles in Bangladesh. Primary data were obtained through surveys and interviews with stakeholders, including government officials, industry experts, university researchers, and startup founders. Secondary data were gathered from government reports, academic publications, private sector analyses, and international journals focused on autonomous vehicle development in South Asia.

Key data sources include:

* **Road Transport and Highways Division, Bangladesh** for policy frameworks and infrastructure reports.
* **Bangladesh University of Engineering and Technology (BUET)** for academic research and pilot project findings.
* **Private Sector Reports** highlighting automotive innovations and investments.
* **IoT and Smart Transportation Project Reports** focusing on infrastructure expansion and integration.
* **Startup Ecosystem Reports from BASIS** for insights into technological developments and entrepreneurial activities.

**Data Analysis Techniques:** Time-series analysis was employed to examine the growth trends in automated vehicle trials, research initiatives, and infrastructure development from 2015 to 2023. Key metrics, such as the number of trials, kilometers of connected infrastructure, and private sector investments, were plotted over time to identify growth patterns and evaluate progress.

Correlation analysis was conducted to assess relationships between variables, such as the impact of research and development activities on infrastructure expansion and private-sector investments. The analysis revealed strong correlations between increased research activities and infrastructure growth, as well as between policy initiatives and public acceptance trends.

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The time-series dataset on automated vehicles in Bangladesh from 2015 to 2023 highlights significant growth and development across various aspects of automation. Automated vehicle trials began in 2016 and increased steadily, reaching 15 trials by 2023, supported by a sharp rise in government funding from 5 million BDT in 2016 to 150 million BDT in 2023. Research projects on automation expanded from just 1 in 2015 to 22 in 2023, reflecting sustained academic interest, while private sector investment surged from 10 million BDT to 200 million BDT during the same period, demonstrating growing confidence in the sector. Public awareness campaigns and policy initiatives also gained momentum, increasing from 0 to 20 and 10, respectively, emphasizing efforts to prepare society and establish regulatory frameworks. Infrastructure improvements, particularly in connected vehicle networks, grew from 0 km in 2015 to 100 km in 2023, supporting advancements in communication technologies. Collaborations between universities and industries rose from 1 to 25, fostering innovation, while the number of startups grew from 1 to 15, showcasing a thriving entrepreneurial ecosystem. Overall, the dataset reflects exponential progress in automated vehicle technologies, with balanced investments in research, infrastructure, and public awareness. Bangladesh is emerging as a regional leader in automation, driven by supportive policies, academic partnerships, and private sector involvement, laying a strong foundation for sustainable growth and future scalability in this domain.