An Efficient Priority Based Student Grievance System Utilizing Artificial Intelligence

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Abstract: *Currently, most of the universities and colleges have an existing system for student grievance. It is semi-electronic or manual and it is not efficient, transparent or with escalation steps. Each complaint is handled in first come, first served mode without assessing the severity or urgency of the grievance. Such a mechanism results in delay, dissatisfaction, lack of communication between students and authorities and also the failure of the system to provide foolproof mechanism to the students to know whether or not the grievance is genuine or not, hence creates distrust problems in the management of complaints. To mitigate such issues, this project proposes an Artificial Intelligence (AI) based Student Grievance Management System leveraging Natural Language Processing (NLP) and Blockchain Technology. The proposed system enables students to file a complaint through a computer interface. Using NLP processes, the text of each complaint is processed to extract the relevant information, sentiment analysis is performed, and the complaints is classified as high priority, medium priority and low priority. It ensures that the priority of an emergency case is given priority while the priority of a regular complaint gets prioritized while the urgency of the concern is not taken into account. The transparency and tamper-resistance are maintained as all the complaints are recorded on a blockchain ledger. This records every change in the status or response from departments, thus we have a track-able record of the complaint. Therefore, both students and administrators can know the situation on the basis of the complaint status in real time. Furthermore the integration of Blockchain technology provides security and trust. The priority system based on AI creates an efficient and responsive mechanism for handling complaints*

Keywords: Grievance Management System, Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing (NLP), Blockchain, Sentiment Analysis, Student Engagement, Data Security, Administrative Dashboard, Multi-Language Support, Mobile Application, Cloud Storage Integration, Real-Time Monitoring, Automated Routing