Research Article

On The Spot (Realtime) Accident Information & Insurance Dispute Resolution

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Abstract

This project introduces an innovative insurance claiming app designed to streamline the process of filing claims by leveraging real-time road accident data. The app employs advanced data analytics and machine learning algorithms to assess accident severity, providing users with a seamless and efficient means of initiating insurance claims. By integrating with various sources of road accident data and user-generated reports, the app aims to enhance the accuracy of claim assessments and reduce processing times.

The user-friendly interface ensures a straightforward experience for claimants, while the app's backend infrastructure ensures secure handling and processing of sensitive information. This research contributes to the evolution of insurance technology, fostering a more responsive and data-driven approach to insurance claim management.

The app's robust framework not only facilitates faster claims processing but also enables insurance companies to make data-informed decisions. By tapping into the wealth of real-time road accident information, insurers can refine risk assessments, enhance underwriting processes, and ultimately improve overall operational efficiency. This project stands at the intersection of emerging technologies and insurance, offering a forward-looking solution to transform the traditional insurance claiming process into a more agile, data-centric, and customer-friendly experience.

Keywords *— Risks, Strategy, Dispute, Prevention, Management of claims*

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1.INTRODUCTION

In an era marked by technological advancements and a growing emphasis on data-driven solutions, the intersection of road accident data and insurance claiming processes stands as a transformative frontier. The proposed website, integrating MySQL's index-based search engine, not only revolutionizes the accessibility of road accident information but also introduces a pivotal feature – streamlined insurance claiming. This amalgamation of cutting-edge technology and practical functionality is poised to reshape the landscape of

insurance processes following road accidents.

The traditional methods of claiming insurance after a road accident have often been marred by complexities, delays, and, unfortunately, instances of fraudulent activities. However, the proposed website offers a paradigm shift by introducing a feature that seamlessly connects the comprehensive road accident data with the insurance claiming process. Through this integration, individuals involved in accidents can navigate a more straightforward and efficient path when filing insurance claims. DB's search engine plays a central role in expediting this process, ensuring that claimants can access accurate and relevant information promptly.

This innovative approach not only enhances the user experience but also addresses one of the longstanding challenges in the insurance industry – fraudulent claims. The website's ability to gather on-spot information and create detailed records becomes a powerful tool for insurance professionals in validating the authenticity of claims. As we delve into the features and functionalities of this groundbreaking platform, the focus on insurance claiming through road accident data emerges as a central element, promising a streamlined, secure, and technologically advanced avenue for individuals seeking financial recourse after unfortunate road incidents.[1]

2. PROBLEM IDENTIFICATION

The potential for fraudulent claims in claiming insurance, where individuals may exaggerate or falsify accident details to secure financial benefits often occur. This not only results in financial losses for insurance companies but also leads to increased premiums for honest policyholders. Furthermore, it's critical to file claims as soon as possible because any delays could give rise to suspicions or make it more difficult to verify the incident.[2]

3. PROBLEM SOLUTION

To enhance the effectiveness of this app and ensure a robust solution, this app enables users to report incidents as soon as they occur through the app. This helps in reducing the chances of false claims and ensures timely information.

This app allows users to upload photos, videos, or audio recordings related to the incident. Visual evidence can significantly reduce fraudulent claims and aid in faster claim processing.

4. FLOW DIAGRAM

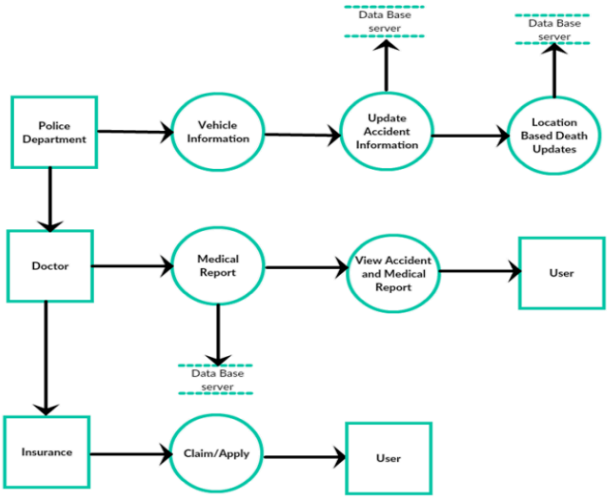

Fig. 1 Overall flow diagram

Fig. 1 is a flow diagram that shows the process of an accident being reported and the subsequent steps that are taken. The process begins with the police department, which gathers information about the accident.

This information is then entered into a database server. The medical report is also entered into a database server. The user can then view the accident and medical reports. They can also update the location-based death information. The insurance company can then view the accident report and

medical report and use this information to process a claim or apply for an insurance dispute resolution.

Overall, this diagram shows how the police department, medical report, and user interact with each other to report and process information about an accident.

5. SOFTWARES USED

Visual Studio Code, it is based on the Electron framework, which is used to develop Node.js web applications that run on the Blink layout engine even it includes built-in JavaScript debugging, IntelliSense, code navigation , formatting, refactorings and offers a robust debugger that allows for seamless troubleshooting and fixing of Django applications.

Django is a Python-based web framework that allows users to quickly create efficient web applications. It is also called batteries included framework because it provides built-in features for everything, which includes Django Admin Interface, default database – SQLlite3, etc. Django can be integrated with different databases like PostgreSQL, MariaDB, MySQL, Oracle, SQLite.

It provides a simple way to switch from the default SQLite database to other database engines like MySql, PostgreSQL, or Oracle, while switching with no need to update SQL code. It provides a generic way to access multiple database backends using a generic interface.

6. MODULES DESIGN

ACCIDENT DATA:

The accident data will be gathered from the different sources by the police department. The information consists of the photos of the site where accident has been taken place, the interviews with the eyewitnesses the person who was physically present at the site where accident has occurred, and even the information about the injuries and fatalities, the actual reason for the happening of the accident may be high speed, drunken driving, distractions to driver, ignoring red light, ignoring safety gears like not wearing seat belts and helmets etc.

ACCIDENT MEDICAL REPORT:

The user can upload the accident medical report, the report consists of immediate symptoms, present symptoms and treatment, loss consequential to injury and at last the reviews of the medical report, which is given by the doctor.The victims or user can also view the medical report which is updated by the doctor. This information is used as a witness to claim insurance.

INSURANCE CLAIM FOR ACCIDENT COMPENSATION:

The first step towards the compensation of medical expenses, lost wages, or other damages resulting from the accident is Claim. The insurance company will then open an investigation of the claim and victims will be asked to upload the accident report or the medical report of the examination by doctors.

7. EXISTING SYSTEMS

This paper proposes a novel system for efficient on-the-spot accident information and insurance dispute resolution. Current solutions encompass mobile applications that enable users to report accidents and initiate claims, telematics and IoT devices for real-time data collection, insurance company portals for digital claim processing, police utilization of electronic accident reporting systems, the widespread adoption of dashboard cameras (dashcams), and the integration of machine learning and predictive analytics for proactive risk management by insurers. Additionally, blockchain technology is explored for its potential to enhance transparency and security in insurance claims processing.

The existing landscape showcases a diverse array of technologies and practices aimed at streamlining accident reporting and insurance claim procedures.

8. CONCLUSIONS

The creation of a dedicated mobile application for claiming insurance after marks a transformative step towards efficiency, convenience, and enhanced customer experience within the insurance industry. This innovative app not only simplifies and expedites the claims process but also empowers policyholders by providing them with a user-friendly platform to navigate through the aftermath of accidents.

The app's real-time claims reporting and document submission features significantly reduce the administrative burden on both insurers and policyholders. This streamlining of processes not only accelerates the time it takes to settle claims but also minimizes the potential for errors and disputes, fostering a more transparent and trustworthy relationship between insurers and their clients.

In summary, the insurance claiming app represents a pivotal advancement in the industry, leveraging technology to streamline processes, improve communication, and enhance overall efficiency. As the digital landscape continues to evolve, such innovations are essential in meeting the evolving expectations of policyholders and positioning insurers at the forefront of customer-centric service delivery.

REFERENCES

[1] Divya N, Dhamini J, Bhavitha B, Jampula Chaithanya, Krishna and Rekha.N "A Survey on Automatic AccidentInsurance claim".

[2] "Insurance Fraud: Overview, Types of Schemes" By JAMES CHEN Updated November 20, 2020.

[3] F. Chen and S. Chen, ''Injury severities of truck drivers in single- and multi vehicle accidents on rural highways,'' Accident Anal. Prevention, vol. 43, no. 5, pp. 1677–1688, Sep. 2011, doi: 10.1016/j.aap.2011.03.026.

[4] J. Tang, F. Liu, W. Zhang, R. Ke, and Y. Zou, ''Lane-changes prediction based on adaptive fuzzy neural network,'' Expert Syst. Appl., vol. 91, pp. 452–463, Jan. 2018, doi: 10.1016/j.eswa.2017.09.025.

[5] M. Poku-Boansi, P. Tornyeviadzi, and K. K. Adarkwa, ''Next to suffer: Population exposure risk to hazardous material transportation in Ghana,'' J. Transp. Health, vol. 10, pp. 203–212, Sep. 2018, doi: 10.1016/j.jth. 2018.06.009.

[6] X. Li, T. Liu, and Y. Liu, ''Cause analysis of unsafe behaviors in hazardous chemical accidents: Combined with HFACs and Bayesian network,'' Int. J. Environ. Res. Public Health., vol. 17, no. 1, p. 11, Dec. 2019, doi: 10.3390/ijerph17010011.

[7] A. J. Khattak, D. Ph, and R. J. Schneider, ''Risk factors in large truck rollovers and injury severity: Analysis of single-vehicle collisions,'' TRB Annu. Meet., Washington, DC, USA, Tech. Rep. TRB Paper: 03-2331, Jan. 2003.

[8] G. Azimi, A. Rahimi, H. Asgari, and X. Jin, ''Severity analysis for large truck rollover crashes using a random parameter ordered logit model,'' Accident Anal. Prevention, vol. 135, Feb. 2020, Art. no. 105355, doi: 10.1016/j.aap.2019.105355.

[9] B. Fabiano, F. Curru, A. P. Reverberi, and R. Pastorino, ''Dangerous good transportation by road: From risk analysis to emergency planning,'' J. Loss Prevention Process Industries, vol. 18, nos. 4–6, pp. 403–413, Jul. 2005, doi: 10.1016/j.jlp.2005.06.031.

[10] S. S. Thomas, S. Gupta, and K. S. Venkatesh, "Perceptual video summarization—A new framework for video summarization," IEEE Trans. Circuits Syst. Video Technol., vol. 27, no. 8, pp. 1790–1802, Aug. 2016.

[11] Y. Xing, S. Chen, S. Zhu, Y. Zhang, and J. Lu, ‘‘Exploring risk factors contributing to the severity of hazardous material transportation accidents in China,’’ Int. J. Environ. Res. Public Health, vol. 17, no. 4, p. 1344, Feb. 2020.

[12] G. J. Simon, P. J. Caraballo, T. M. Therneau, S. S. Cha, M. R. Castro, and P. W. Li, “Extending association rule summarization techniques to assess risk of diabetes mellitus,” IEEE Trans. Knowl. Data Eng., vol. 27, no. 1, pp. 130–141, Jan. 2015.

